



Theodore  
Besterman

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# ARS PICTORIA: OR AN ACADEMY

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PAINTING, || <sup>AND</sup> ETCHING.

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OR AN

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AND  
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## To the Reader.

**Y**OU have the Contents of this Treatise so particularly in the *Title-page*, that I meant it no other *Preface*: But upon second thoughts, I shall say somewhat to the Conception of *Paulus Lomatius*, Page the 11th. touching the Affinity betwixt *Symetry* and *Musique*. It has been urged, that in regard of the Obscurity of the *Musical termes* there made use of; as *Diapente*, *Diapason*, *Sesquialter*, &c. It were requisite to give some explanation of them; but I shall rather referr the Reader for his satisfaction to *Mersennus*, *Morley*, or any other writer upon that Subject; then enlarge this Discourse; which I have contracted, both for his ease and my own, as much as I could conveniently. But if any ill temper'd person should be angry at the hard words and Terms of *Art* here, because they do not well understand them: They may know this was not intended for a Dictionary, but a Treatise only for the ingenious, who need no Key to lock or unlock this Cabinet, in which these Mysterious terms are couched. Neither have I been ambitious in the least of popular applause in the publication of this Piece, but meerly have aimed at the publique benefit, being ashamed it should be objected 'that I who have in the course of my Life and Study been so much beholding to others, should prove ungrateful, or niggard, to conceal any thing from the view of the world, since we are as Men and Christians, all designed by industry and experience to improve each other; more particularly what I have here wrote, is directed to the lovers and favourers of all noble Sciences, to whom I stand oblig'd, and whose pardon I only beg, wherein I may be found unhappily or ignorantly offensive. And indeed I am extreamly unwilling any person should lose time, or take the trouble of casting his eye here, were not I modestly of the opinion, something may not be impertinent, or unworthy curious mens Lektion.



## ALEXANDRI BROWNE

Generosi &amp;c.

**T**Andem *Browne* venis, expectatissimus hospes  
 Florilegas imitatus Apes; qui Sculptilis Artis,  
 Quicquid ab externis populis exfuxeris, annis  
 Pluribus, in proprium prudens disponis Hymitton,  
 Et nunc in Patrii partiris commoda Mundi.  
 Quanta Poëtarum præconia dona morantur,  
 Quanta Patronorum Te! Qui velamine dempto  
 Artibus, antiquum reparata luce Timantem  
 Afflâsti, & Britonum radiis melioribus orbem.  
 Quod si *Roma* dabat pro digno munere ferta,  
 Civica, cui civem Bello servaverat unum;  
 Debentur tum *Browne* tuis quot ferta capillis!  
 Qui tot semineces artes in luminis auras  
 Duxisti, propriaque manu cælata novâsti  
 Artificum simulachra Senum. Jam Coüs *Apelles*,  
 Praxitilesque cluens, & magni nominis Urbin,  
 Angelo & insignis, visi rupisse sepulchris,  
 Et rediviva sibi sumpsisse cadavera rursus,  
 Auspiciis mi *Browne* tuis. Correggio jamjam  
 Et Delvincentus, nec non Holbenus, & audax  
 Titian, et nostri Vandikus gloria secli,  
 Dogma Pythagoricum, de sponte fatentur, & artes  
 Sculpendi pariter veterum, pariterque modernæ,  
 In chartas migrâsse tuas: ubi machina Mundi  
 Et nitido natura Globo spirare videtur  
 Principiis animata novis. I fortibus ausis  
 Dexter Alexander, multo et fælicior illo  
 Qui face lanquentem ferroque subegerat Orbem;  
 Alitibus procede bonis! nomenque per artes  
 Sic extende tuas, ut te primæva salutent  
 Teque hodierna suum, venturaque secla Magistrum.

P. Fisher dudum Militum

Serviens Major.

## INGENIOUS FRIENDS

Most

## EXCELLENT PIECE.

**H**ere you may find objected to your Eye,  
 Paint, the creations, Man Gods Ima'gry.  
 What scatter'd ray's of Heaven in us remain,  
 Are here preserv'd, if not renew'd again.  
 For who can draw to life the humane face  
 Do's therein shew the intellectual grace.  
 Whose fair Idea though it's not opprest  
 With natures body, or Arts colour drest.  
 From thence yet all those num'rous shadow's flow,  
 Which men so worship and admire below.  
 Fancy th' original, and parent, gives  
 This Art a birth, which beyond nature lives,  
 And keeps the Father youthful as the son,  
 With the same colours, when complexions gone.  
 Death cannot part them; for when ugly age  
 That Grand destroyers, last and fatal page  
 Is all decipher'd, He a column stands  
 Coeval to his heirs, and all his lands.  
 And when his body to the grave is sent  
 He serves for furniture and monument.

Nature is troublesom in its decays,  
 No Poet cares to wear the wither'd bayes.  
 'Tis kindness, and 'tis manners to remove,  
 When we can neither be belov'd nor love.  
 Must then all die? no, that the painters skill  
 Forbid's, assisted with the Writers quill.

This immortality dear Friend you cause,  
 Without ordaining, or repealing Laws.

Yours

Your Book advances further, and displays  
 What Plutarqu's *Morals*, or his lives have said.  
 Weary Philosophy expires in strife  
 Whil' st you expose plain truth unto the Life.  
 Natures excess, or narrowness by you  
 Is civilly reprov'd, and all that's due,  
 Of beautionous art, and Symetry to man,  
 Must own its payment to your mind and hand.  
 We know no form of Angels but from paint,  
 Nor difference make of devil, or of Saint.  
 The famous Michael Angelo so drew  
 Hell and the damned, and in such a hue;  
 'Twas thought th' Archangel some old grudge might bear,  
 And bid his name-sake to renew the war.  
 'Tis then hop'd by the painter at the least,  
 He may assistant be unto the Priest.  
 Since *Virtu's* lovely drawn, and vice soe ill  
 Sinners by him converted are 'gainst will.  
 Emblems of honour, piety, and love,  
 Arts greatest teachers, by him only move.

J. H.

#### ERRATA,

In Pag the 4 Line. 15. for it, Read us; for whosoevver Read whatsoever. In Pag  
 17. line 15. for in, read and. In pag 73. line 24. for Sonne, read sun. In pag 74. line  
 4. for near, read were. In pag 87. line 10. for keeping colour, read keeping the  
 colour. In pag 88. line 21. for silvea, read silver. In pag 90. line 3. for use with,  
 read use it with. In pag 92. line 7. for white Serus, read white or Serus.



# OF THE Vertue and Praise

O F

*PROPORTION*, or, *SYMMETRY*.

**S**UCH is the Importance and Vertue of *Proportion*, that nothing can any way satisfie the Eye without the help thereof: So that whatsoever worketh any Pleasure or Delight in us, doth therefore content us; because the Grace of *Proportion* consisting in the measure of the *Parts*, appeareth therein; Wherefore all the *Inventions* of Men carry with them so much the more Grace and Beautie, by how much the more Ingeniously they are proportioned, whence *Vitruvius* saith; *That whosoever will proceed in his Works with Judgment, must needs be acquainted with the Nature and Force of Proportion*; which being well and kindly understood, will make him not only an excellent Judge of ancient and late Workmen, but also an *Inventor* and *Performer* of Rare and Excellent *Matters* himself.

Now the Effects proceeding from *Proportion* are unspeakable, the Principal whereof, is that Majestie and Beautie which is found in *Bodies*, called by *Vitruvius*, *EURITHMIA*. And hence it is, that when we behold a well-proportioned thing, we call it *Beautiful*, as if we should say, Indued with that exact and comely Grace, whereby all the Perfection of sweet *Delights* belonging to the Sight, are communicated to the Eye, and so conveyed to the Understanding.

But if we shall enter into a farther Consideration of this *Beauty*, it will appear most evidently in things appertaining to Civil Discipline; for it is strange to consider what effects of Piety, Reverence and Religion;

A

are

are stirred up in mens Minds, by means of this fuitable comeliness of apt proportion. A pregnant example whereof we have in the *Iupiter* carved by *Phidias* at *Elis*, which wrought an extraordinary sense of Religion in the People, whereupon the antient and renowned *Zeuxis* well knowing the excellency and dignity thereof, perswaded *Greece* in her most flourishing Estate, that the Pictures wherein this Majesty appeared were dedicated to great Princes, and consecrated to the Temples of the Immortal gods, so that they held them in exceeding great estimation; partly because they were the Works of those famous Masters, who were reputed as gods amongst men; and partly because they not only represented the Works of God, but also supplied the defects of Nature: ever making choice of the Flower and Quintessence of Eye-pleasing delights.

Neither yet is this Proportion proper unto painting alone, but extendeth it self even unto all other Arts; insomuch as is drawn from mans Body, which as the Painter chiefly proposeth to himself, (as *Vitruvius* noteth) so doth the Architect much imitate it, in the convenience of his buildings, and without which, neither the Carver, nor any Handicrafts man can performe any laudable Work; because it was the first pattern of all Artificial things: So that there is no Art, but is someway beholding to Proportion: yet notwithstanding the Painter as (*Loo Baptista Albertus* affirmeth) insomuch as he considereth mans Body more especially, is justly preferred before all other Artizans, which imitate the same, because antiquity meaning to grace Painting above all the rest, Handicrafts men exempting onely Painters out of that number.

*Of the Necessity and Definition of Proportion.*

**I**T was not without just Cause, that the antient *Gracians* (at which time the Art of Painting had fully attained to his Perfection, by the Industry of *Timantes*, *Euseuidas*, *Aristides*, *Eupompus*, *Sicyonias* and *Pamphilus*, the Famous *Macedonian* Painter, and Master of *Apelles*, who also was the first learned Painter directing his Workes by the Rules of Art, above any of his Predecessors, and well considering that whatsoever was made without measure and proportion, could never carry with it any such congruity as might represent either Beauty or Grace to the judicious beholder) were wont to say, that it was impossible to make any tolerable, much less any Commendable Picture, without the help of *Geometry* and *Arithmetick*, wherefore they required the Knowledge thereof, as a thing most necessary, which saying was also approved by *Philip Macedo*. And surely it is impossible (to omitt the meere Artizans) that he who is ignorant of these two Sciences, should understand the exact measure and proportion of any probable or true Body, the necessity of which proportions shall be shewed hereafter.

It is apparent then that a Picture lacking this, is like a piece of Marble grossly wrought, without Rule or Measure, or two Columns : which although they be to slender, or to grosse, to short or to long, yet are called Columns ; as Dwarfes and deformed Creatures are named Men. Now this Book shall contain the general proportions of the principal things alone, from whence the rest are derived, of which before I begin to speak. *I hold*



it convenient to consider the definition of proportion, and the parts thereof;

Proportion is a correspondency and agreement of the Measure of the parts between themselves and with the whole, in every Work, this correspondency is by *Vitruvius* called Commodulation, because a Modell is a Measure which being taken at the first measureth both the parts and the whole. And this is that (to omitt the severall kindes thereof, which shall be distinguished in their due place,) which for so long space having been lost, was the cause why the exact and true proportion of Mans Body was not understood, by Occasion whereof there never came any Excellent Peeces abroad, although the matter were never so costly: And consequently that the Painters being ignorant of that they had in hand, instead of proportionable men made lame Pictures as the Architecture, Temples, Images, and Pictures made throughout the whole World (but especially in *Italy*) about the time of *Constantine* the Great, untill *Giotto* in *Tuscany*, as *Andrino di Edesa* in *Lombardy* can sufficiently witness, and this (in a word) is that, the knowledge whereof so satisfieth the judgment, that it maketh it not onely able to make whosoever we list, but also teacheth us to judge of Images, and Pictures, as well ancient as new, and without this a Painter (besides that he is not worthy the name of a Painter) is like one which perswadeth himself he swimmeth above Water, when indeed he sinketh, to conclude then it is impossible to make any decent or well proportioned thing, without this *Symmetrical* measure of the parts orderly united.

Wherefore my greatest endeavour shall be, to lay open the worthiness of this part of painting unto

unto all such as are naturally inclined thereunto, by reason of a good temperature joyned with an apt Disposition of the parts thereof, for such men will be much affected therewith, to the end they may the better perceive the force of *Nature*: vvho by industry and help of a good conceipt, vvill easily attain to so deep areach, that they vvill be able upon the sudden to discern any Disproportion, as a thing repugnant to their *Nature*: unto which perfection on the contrary Side they can never attain, vvhose Judgements are corrupted through the *Distemperature* of their *Organical* parts, I speak of such vvho not knowing the virtue of proportion, affect nothing else, but the vain surface of *garish colours*, wrought after their own humour, vvho prove only *Dawbers of Images* and *Walls* throughout the whole World; moving the beholders partly to smile at their Follies, and partly to greive that the Art should be thus disgraced by such absurde *Idiot's*: who as they have no judgement herein; so do they run into divers other most shamefull errors, into which I never heard that any ever fell, who were acquainted with the *Beauty* of proportion, but have rather prooved men of rare Spirits and sound Judgements, as may be gathered by the great request it was in, untill the times of those Princes, as well antient as late: *But before I proceed any farther, I think it necessary to treat something of a Head in particular, First,*

*Of the Head in Profile or side-ways.*

THE manner to make this *Head* by just and safe rules is thus, First forme a perfect equall Triangle in what position you will, turning the Triangle to make the *Face* upon one of the three sides, be it

B

which

According to  
Odoardo Fi-  
alini.

which it will, either upwards or downwards, higher or lower; dividing that side into three equall parts, the one to serve from the lower part of the *Haire*, to the lower part of the *Forehead*; the Second thence to the under part of the *Nostrils*; the Third to the lower part of the *Chinn*: now having framed these three lines, draw a little crooked stroak vvith a *Cole* or *Chalk*, out of the right Line, that may reach from the top of the *Forehead* unto the *Eye brow*, from vvhence draw away the slope Line, bending at the end. To performe the *Nose*, either long, short, gros or thin, as you vvould have it, ending that at the second distance, vvhere the *Nostrils* end, then subdivide the remaining third part in the midst, vvhere the *Mouth* shall be placed for the parting of the upper and under *Lipps*, then frame the *Chinn*, having a respect to the perpendicular Line, that it fall not out of the middle of the *Chinn*; adjoyning thereto the under *Chinn* down to the *Throat-pit*. So vvith the other two dividing lines, the one from the Top of the *Forehead* downwards (and ends in the midst of the back part of the *Eare*;) the other proceedeth upwards from the *Chinn*, ascending till that meet vvith the Superiour descending Line, vvose Interfection directeth the *Eare*, that the circumference thereof stretch not too far: Thus vvith your judgement take the upper part of the *Forehead*, and come to describe a great circular Line about, to Form vvith that the roundness of the *Head*, unto the Nape of the *Neck*, keeping the proportion that *Nature* teacheth; and from thence downwards frame the rest of the *Neck*, remembering that the Tip of the *Eare* doth not exceed the lower part of the *Nostril*. So you may have the Head in what

*Position*



*Position you will, so this abandon not the two other Lines, each concurring in their due points.*

*Of the Foreright Face.*

**B**Eing then desirous to draw the Foreright *Face*, it will benecessary to Forme a perfect *Ovall*, which being made, divide it in the midst, with a line the longest way ( that is to say ) a perpendicular line, divide this line into three equall parts, allowing a fourth of one of the three parts for the Hair in the *Forehead*, the First for the *Forehead*, the Second for the *Nose*, the Third for the *Chin*. In the midst thereof must the *Mouth* be formed, alwayes remembring that the *Eyes* must be in one line, the cross line of the *Nose* and *Mouth* must alwayes be correspondent to the cross line where the *Eyes* are placed, and the *Eyes* must be the length of one *Eye* distant from the other; and that their inward Corners be perpendicularly over the out-side of the *Nostrils* punctually, but to make the *Eares* in a Foreright *Face* proportionable, they must be much Foreshortned by Foreshortning, I mean when the *Eye* doth not see the full Latitude of it, the proportion of the length of the *Eare*, to be from the *Eyebrowes* to the bottome of the *Nostrils*, and then joyn the *Neck* with the *Hair* in such sort as may seem most pleasant unto the *Eye*.

*Of the Head in Foreshortning.*

**H**itherto I have treated of the *Head*, both Foreright and in other Positions, but that you might know all that is needfull for the perfect understanding of this profession, it is necessary that I specify the manner how to draw the *Face* by an easy, ab-

solute and fair way; Treating thus I propound to you Methodical means therein; because my intent is to Facilitate the matter in that manner, but without writing thereupon it may be intelligible, for a draught well made hath that power, that it makes it self understood without any discourse of the Author thereon, but I alwayes observe both the one and the other also; I say that the *foreshortning* which is made onely with *Fretts*, *Grates*, *Squares*, or with *Geometrical Instruments*, breed onely a confusion of lines, which is not the best principal of expert Ingenuity, the reason whereof is, that it can hardly be measured by any Rule, unless the whole Body be framed together. *Therefore I will shew an easy Rule, very like to that of the foreright Face, that is, to make a Circular draught with the aspect upwards, or downwards, as in the foreright Head, where the Traversel lines are straight, but these go Circularly, for if the Heads fly upwards the Traced strokes and the Divisions must be raised, with caution that the Eares and Eyes fall not out of their due points, as is signified in the first Plate.*

*Of the side face without any Measure.*

BEING desirous to make the side face without any Triangle or Measure, which with a little care and practice, observing the distances and Measures which will serve for Direction, because the Head and other parts of the Body ought to be proportional, and made from Measures; it will easily follow, Framing or Tracing many, you may not only Facilitate it by the Eye and Judgement, but also accommodate the Hand, to Trace and draw, all things right, for it is true that the Eye will have its place. I having drawn certain stroaks or draughts  
from

from the life of *nature*, and reduced it with the Pencil into Colours, have found it come off punctually right, of a correspondent bigness to that, which I have imitated, and have not found any thing disproportioned, but have alwayes found it fall out right as I would have it, therefore I say that this Rule, and Measure which I have set down, in the *Porphile* or other oppositions of the *Head*, is not any hindrance to the excellency of the Art, nor will weaken your worth; but will serve for a general Rule being once possesst therewith, and also become prevalent when occasion shall require, to make a *Head* Ten times as big as the *Life*; for that with this Measure, you shall readily Frame it right by any great *Head*; and that because the understanding therein is equally extended, but the more the capacity is wanting, the more my Labour will farther when need requireth. *These then I give as Principal for the first stroakes, as in the next figure may be perceived, which is from the Forehead, as I have already said, for the beginning of the Nose; that is from the lower part of the Hair, to the hollownes of the Nose and the Nostrils, and from thence to the Chinn.*

*Several Observations, in drawing a Head after the Life.*

AND because the greatest difficulty, and principal parts of this Art consist in some part in drawing the lively Resemblance of a *Face*, therefore I thought it very necessary to add this as a further Direction to draw any *Face* after the life. Therefore if you will draw any *Face* after the life, that it may resemble the party you draw it after; take notice in the First place of the *Physiognomy* or circumference of the *Face*, whether it be round or long, Fat or Lean, Big or Little;



so that in the First place you must be sure to take the right *Physiognomy* and bigness of the *Face*, and in case it be a Fat *Face*, you will perceive the *Cheeks* to make the side of the *Face* to swell out, and so make the *Face* look as if it were square : And if it be neither too fat nor too lean, it will be round for the most part; but if it be a lean *Face* the *Jaw-Bones* will stick out, and the *Cheeks* fall in, and the *Face* will be long and slender, observe when you draw the outmost circumference of a *Face*, to take the *Head* and all with it, or otherwise you may be deceived in drawing the true bigness of a *Face*, then you must diligently and judiciously observe and discern all the Gentle *Master Touches*, which gives the Spirit and Life to a *Face*, and discovers the Grace or Disposition of the *Mind*, wherein lieth the whole Grace of the Work, and the Credit of the *Artist*, you may easily discern a smiling Countenance in the Corners of the *Mouth*, when they turn up a little; you may best discern a staid and sober Countenance in the *Eyes*, when the upper *Eyelids* comes somewhat over the Balls of the *Eyes*, but a frowning Countenance is easily discerned in the *Forehead* by the bending of the *Eyebrowes*, and some few wrinkles about the top of the *Nose* between the two *Eyebrowes*, and a laughing Countenance is easily discerned all over the *Face*, but an angry Countenance is discerned by extraordinary frowning; there are also some touches about the *Eyes* and *Mouth* which you must diligently observe, which gives the Spirit and Life to a *Face*.

*The Proportion of a Man of Ten faces.*

IT standeth with good reason, that ( following the Method of the Antient *Gracians* ) I should make this

this Body, whose proportion I intend to handle particularly, answerable to the *Symetry* of all other Artificial Bodies, which may be made farre more Beautifull, then *Nature* affordeth any; wherein notwithstanding the whole *Symetry* of Art may be comprehended more or less; and this Point I mean to handle in this Chapter and the next, wherefore I have prefixed this before the rest, because it is, as it were the Foundation of them all. This Figure then is First divided into Ten parts or faces: the First whereof (I mean in length) beginneth at the top of the *Head*, and reacheth to the root of the *Nostrils*: the Second from thence to the *Throat-pit*: the Third thence to the parting of the *Breast*: the Fourth thence to the *Navile*: the Fifth thence to the *Privities*, which is just the middle of the length of the Body, from thence to the Sole of the *Foot* are Five Faces, whereof two lye between the *Privities* and the *Mid-Knees*, the other three betwixt that and the Sole of the *Foot*. Thus according to this Divison all these Parts are equall.

Now the first Part from the Top of the *Head* to the *Nose*, answereth to the space betwixt that and the *Chinn*, in a triple proportion, (which maketh a *Diapente* and a *Diapason*) that beneath the *Chinn*, and the *Throat-pit* answereth to that betwixt the *Nose* and the *Chinn* in a double proportion (which makes a *Diapason*) whereunto the *Head* answereth in the same proportion; the Three faces (between the *Throat-pit* and the *Privities* answereth to the Second betwixt them and the *Knee* *Sesquialter* proportion, whence ariseth a *Diapente*, but with the *Leggs* they are *Vnisons* for it hath the same proportion with the *Thigh*.

According to  
John Pauke  
Lomatius.

Now the breadth of this Body consisteth likewise of Ten faces; namely between the extremities of both the middle fingers, when the *Armes* are spread abroad

abroad, and is thus divided: One to the *Wrist* of the *Hand*, one and a half to the *Elbow*, so much to the *Clavicola* or joynt of the *Shoulder*, and one to the *Throat-pit*, so that only the *Hands* are *Unisons*, with that between the *Shoulder-Joynt* and the *Throat-pit*, and the space between the *Shoulders* and the *Elbow*, with that between the *Elbow* and the *Wrist*; so that these answer to each other in a *Sesquialter* proportion called a *Diapente* ) again a *face* is as much as the distance between the *Nipples*, and so much more from each of them to the *Throat-pit*, making an *Equaliter* Triangle.

The compass of the *Head* from the *Eyebrowes* to the *Neck* behinde is double to the length of the whole *Head*, the circumference of the *Waste* is a Triple *Sesquialter* to the *Diameter* thereof; and is all one with the *Trunk* of the *Body*, which is three *Faces*, the circumference of the *Body* under the *Arm-pits*, and the space between them and the *Wrist* answer in a double proportion, and is all one with any half of the *Body*.

The Measures which are *Unison* or all one, and equall between themselves, are these: First the space between the *Chinn* and the *Throat-pit*, is as much as the *Diameter* of the *Neck*: the circumference of the *Neck*, is as much as from the *Throat-pit* to the *Navile*, the *Diameter* of the *Waste* answereth to the distance between the *Knobbe* of the *Throat* and the top of the *Head*, and this is the length of the *Foot*, the space between the *Eyelids* and the *Nostrils* is all one with that betwixt the *Chinn* and the *Throat-bone*, again from the *Nose* to the *Chinn*, is as much as from the *Throat-Bone* to the *Throat-pit*, moreover the space from the hollow of the *Eye* below, and from the *Eye-brow* to the Center of the *Eye*, is the same with the prominency of the *Nostrils*,



*Nostrils*; and so much it is between the *Nostrils*, and the end of the *Upper Lip* so that these three spaces be equal, besides the distance between the top of the *Nail* of the *Fore-finger* and the last Joynt thereof, and from thence to the *Wrist* are equall, again the space between the *Nail* of the *Middle Finger*, and the last Joynt thereof; and from thence to the *Wrist* is all one, the greater Joynt of the *Fore-finger*, is the height of the *Fore-head*, and the space between that Joynt and the top of the *Nail*, is equall to the *Nose*, beginning at the bottome of the most eminent Arch above the *Eyes*, where the *Fore-head* and the *Nose* are divided, the two first Joynts of the *Middle Finger*, are equall to the space between the *Nose* and the *Chinn*, the first Joynt whereon the *Nail* groweth; is the distance between the *Nose* and the *Mouth*; so that the second Joynt answereth to the First in a *Sesquialter* proportion, as also doth the space between the *Mouth* and the *Chinn*, (whence ariseth the *Concord Diapente*) the bigger Joynt of the *Thumb* giveth the length of the *Mouth*, the space betwixt the top of the *Chinn*, and the Dint under the *Lower Lip*, answereth to the lesser Joynt of the *Thumb*, and is as much as from the *Nose* to the same Dint, wherefore from the greater Joynt there is a *Sesquialter* proportion and a *Concord* (*Diatefferon*) the last Joynt of each *Finger*, is double to the length of the *Nail*, and maketh a *Diapason* from the middst between the *Eye-brows* to the outward Corner of the *Eye*, is as much as from thence to the *Eare*, the heighth of the *Fore-head*, the length of the *Nose*, and the length of the *Mouth* are (*Unifons*) the breadth of the *Hand* and *Foot* are all one, the length of the *Foot* in respect of the breadth maketh a double (*Supra bi partient*, and a *Diapason* and a *Diatefferon*.)

## Of Proportion

The breadth of the *Foot* to his height at the *Instep*, makes a (*Sesquialter* and a *Diatefferon*) the breadth of the *Hand* is double to the height, the *Arches* of the *Eye-browes*, are equall to the Arch of the *Upper Lip*, at the Division of the *Mouth*, the breadth of the *Nose* and the *Eye* is all one, and either of them half the length of the *nose*, the *navile* is the midst betwixt the *nose* and the *Knee*, from the top of the *Shoulder* to the *Elbow*, and from thence to the *Hand*, is a *Diatefferon*, the space between the lower end of the *Eare*, and the Joynt of the *Shoulder*, is half as much as the breadth of the *Breast* at the *Shoulders*, which maketh a double *Sesquialter* the whole breadth of the *Body* to the space between the top of the *Head*, and the *Throat-Bone* makes a *Quadruple proportion*; whence ariseth a *Disdiapason*, the same proportion hath the *Cubit*, or lower Part of the *Arme* from the *Elbow* to the top of the *Middle Finger*, with the breadth of the *Body*, by the *Armes* spread abroad the breadth of the *Flanckes* is double to the *Thigh* or a *Diapason*, the length of a *Man* is all one, with his breadth.

The breadth of the *Back* at the *Arme-pits*; of the *Hippes* at the *Buttocks*, and of the *Leggs* at the *Knees*, in respect of the *Soles* of the *Feet*, make a triple (*Sesquitertia*) the like is from the space of the *Head* to the *Breast-pit*: the *Diameter* of the *Head* at the *Forehead*, to the depth thereof, (that is between the *Eyes*, and the *Nape* of the *Head*) is a *Sesquioctava*: whence ariseth a *Tone*, the circumference of the *Fore-head* at the *Temples*, is a *Quadruple* to his height, or a *Diapason*, the height of the *Face*, and the space between the *Chinn* and the *Throat-Bone*, makes a triple proportion, or a *Diapason*, and *Diapente*.

And thus if we should proceed, we might finde in the *Head* all the other proportions of the *smallest Parts*, together with their *Concord* most exactly: which for *Brevities sake* I omit, hastening

*ing to the Measures of all the Parts, which are truly Symmetrical, and correspondent to the Parts of the World.*

*The Proportion of a Mans Body of Ten faces.*

**T**He proportion of a long and slender Body must be patterned after the Body of *Mars* the god of Warr, amongst the *Gentiles*, who by reason of his Heat and Dryness hath a long and slender Body agreeable thereunto; and may also serve for any other Body of that *nature*, as being Boysterous, Cholerick, Cruel, Martial, Mutinous, Rash and prone to Anger; as are all active and strong men, by reason of the bigness of their *Bones*, void of much Flesh; which causeth them to be of a hard, and sharp Body, with great Joynts, and big *Nostrils* dilated with Heat, whose *Eyes*, *Mouth*, and other passages, are correspondent; as in his due place shall be more particularly shewed.

The breadth of the Hand, being divided into Four Parts, maketh the Four *Fingers* from the top of the Middle Finger to the *Elbow*, is the Fourth Part of the whole Body; *And this proportion is of such indifferent Beauty, that sparing the Martial asperity and bouldness, it may fit divers other slender and noble Bodyes, as occasion shall serve.*

*The extravagant Proportion of Ten Heads.*

**S**ince my purpose is to Handle this matter exactly it shall not be amiss, briefly to touch the sleight proportion of Ten Heads delivered by *Albert Durer* for although it be (in truth) to slender in all Mens Judgements, yet I may not omit it, because it hath the authority of so Famous a Man in the Skill of



*Painting*, as *Germany* cannot match again. First then this proportion is in length from the top of the *Head* to the *Chinn*, a tenth part of the whole: thence backwards to the top of the *Fore-head*, an Eleventh: *The face may be divided into Three equal Parts, as the rest are.*

*The Proportion of a Young Man of nine Heads.*

I Am of opinion that *Francis Maggallinus* would have proved the only rare Man of the World, if he had never *Painted* any other kind of *Pictures* ( as rude, gross, and melancholly ) then these slender ones which he represented with an admirable dexterity as being naturally inclined thereunto; so that if he had only represented *Apollo*, *Bacchus*, the *Nymphes*, &c. he had sufficiently warranted this his most acceptable proportion, which was ever slender, and oftentimes to sleight, but when he took upon him to expresse the Prophets, our Lady and the like in the same; as appeareth by his *Moses at Parma*, our *Lady at Ancona*, and certain *Angells* not farr from thence, and divers other things quite contrary to the *Symetry* they ought to have, he gave a president to all other *Painters* to shunne the like error: which himself might also have easily avoided, being reputed little inferiour to *Raphael Urbine*, whom he might have proposed to himself as a patterne; for *Raphael* ever suited his personages answerable to the variety of the *Natures*, and *Dispositions* of the Parties he imitated: so that his Old Folks seem stiff and crooked, his Young Men agile and slender, and so forth in the rest, which example admonisheth us, that a *Painter* ought not to tye himself to any one kind of proportion, in all his Figures; for besides that he shall lose the true *Decorum* of the History:

He

He shall commit a great absurdity in the *Art* by making all his *Pictures* like *Twins*: Into which error notwithstanding divers (otherwise worthy *Painters*) have runn, whose names I suppress; and especially one of those two great ones, which over-sight all good practitioners will easily discern, because all their *Figures* are of an Uniforme proportion, though wonderfully expressing variety of actions: And for our better understanding in this kind of proportion (as best fitting Young Men, who are somewhat Beautiful by means of their slenderness, agility, and gentle Disposition mixed with a kind of boldness) *Raph: Urbine* hath very well expressed it in *St. George* fighting with the *Dragon*, now to be seen in the Churches of *St. Victore de Fratri in Milane*; in *St. Michael* at *Fontainbleu* in France, and in that *George*, which he made for the Duke of *Urbine* on a Peice richly gilt, according to which Observation of his, every Man may dispose of this proportion in the like young Bodies, now for our more exact insight hereinto, by way of precept, we must first note that a slender young Body of Nine Heads is from the top of the Head to the end of the Chin, a Nineth Part of the whole length: And thence back again to the root of the Hair a Tenth or Eleventh Part, as I have observed in *Raphaels St. Michael* and in an old *Apollo*, but which way soever you make it, this space is divided into Three equal Parts; whereof the First makes the forehead, the Second the Nose, the Third the Chin, howbeit I grant that in a face which is the Eleventh Part (by reason of a certain Tuff of Hair which is usually expressed) the forehead becometh lower by a Third Part; which Rule the antient *Græcians* kept, as their Statutes do evidently witness.

*The Proportion of a Man of Eight heads.*

WHEREAS in every Work there is some one entire Figure, whereunto all the particulars of the whole History ought to be *principally* referred, the *Painter* ought not to imagine, (because he is more skilfull in representing some other thing in the work then that which beareth the reference of the whole) that therefore he shall deserve commendation, but rather discredit, for it is most certain that Work will prove offensive, where some inferiour and by matter, is more curiously handled then the principal, and the rather, because the other Parts cannot chuse but loose their Grace. A thing which hath caused divers excellent *Painters* (as well new) as antient (being purposely carried away with too great a desire of doing well) to leave their Works imperfect, which they could not remedy any other way, then by utterly defacing that which they had done, were it never so excellent.

A most pregnant example whereof we have in that antient *Painter Euphrazor*; who being to draw the *Twelve gods* in *Athens*, he began with the Picture of *Neptune*, which he wrought so exquisitely both for proportion, colour, and all other points; that purposing afterwards to make *Jupiter* with far greater perfection, he had so spent his conceit in the First Figure, that he was not able afterwards to express any of the other gods, much less *Jupiter* the like Disgrace happened to *Zeuxes* by the Naturaleness of his Grapes, and the Imperfection of the Boy, not unlike unto which was that of *Leon: Vincent* of late Dayes, who being to Paint *Christ* at his last Supper in the middst of his Disciples in the *Refectory* of *St. Maria*



*Maria de Gratia in Milane*, and having finished all the other *Apostles*, he represented the two *James's* with such perfection of *Grace* and *Majesty*, that endeavouring afterwards to express *Christ*, he was not able to perfect and accomplish that sacred Countenance; notwithstanding his incomparable skill in the *Art*, whence being in a desperate Case, he was enforced to advise with *Bernard Zenale* concerning his Fault, who used these Words to comfort him. *O Leonard this thine Error is of that quality, that none but God can correct it*; for neither thou nor any Man living, is able to bestow more Divine Beauty upon any Figure, then thou hast upon these *James's*, wherefore content thy self, and leave *Christ* unperfect, for thou mayest not set *Christ* near those *Apostles*, which advise *Leonard* observed, as may appear by the Picture, at this day, though it be much defaced. Whence my Council is; that for the avoiding of the like Errors, we examine the original thereof, having an especial regard to our proportions; as the cheif Cause of the grossness, slenderness, clownishness, and daintyness of Bodies: whence all the Beauty and Ill-favourdness of Pictures proceedeth; wherefore let each Body have his true and particular proportion: which is to divide the Body into Eight equal Parts, whereof the head is one, which may serve for all Men in general, who agree with this most absolute form, whose proportion followeth.

*Of the Proportion of a Mans Body of Seven Heads.*

THE grand Philosopher *Pythagoras*, giveth sufficient Testimony of the Truth of these Rules concerning the proportion of Mans Body; inso-much as by their help he distinguished the proportion of *Hercules* his Body, from the other gods, by finding out the true Stature thereof, and consequently how much he exceeded the Stature of ordi-

nary Men; of whom *An: Gellius* writeth, that he observed the Quantity of *Hercules Foot*, wherewith the race in *Acaia* before *Jupiter Olmypius* his Temple (where the *Olympian Games* were celebrated every Fift Year) was measured; and found it to agree, in the Number of *Feet*, with the other Races, which were six hundred Twenty Five *Foot*; and yet to be much longer then any of the rest.

By which Example we may easily conceive, that every proportion will not fit all kindes of Bodyes, because there are many varieties thereof, as there are *Natural Differences* of Bodyes, wherefore I will proceed to the handling of the proportion of a Body of Seven substantial and big Heads, all whose Members are strong, sturdy, and raised; his length then from the Crown of the Head to the Sole of the Foot, is Seven-times the length of his head.

*Of the Proportion of a Woman of Ten Faces.*

Albeit Dame *Nature*, the cunningest Work-Mistress of all others, doth ordinarily observe so great variety, in all her Workes, that each of her particulars differeth in *Beauty and Proportion*; yet notwithstanding, we find by experience, that she is more industrious, In shewing her Art and Skill in some few most Beautifull creatures, whereupon I (inasmuch as Art being the counterfeiter of *Nature*, must ever endeavour to imitate the most absolute things) intending to handle the proportion of a *Woman* mean not to spend much time in discoursing of the severall proportions of all the Sorts of *Women* which *Nature* affordeth (for that were infinite) but purpose to write only of the most pleasing proportions appearing in dainty and delicate Bodies, now this Body is thus measured: Divide the Body into  
Ten

Ten equall Parts, whereof the *Head* must be one; from the *Crown* of the *head* to the *privities* must be Five of the Ten, and from the *privities* to the *Sole* of the *Foot* Five more.

And this is the Measure and proportion of a comely Womans Body, drawn not only from the observations of the antient Statues of *Venus*, but even from the ground of Nature itself; which proportion may serve for any Woman, wherein you would especially represent the perfection of *Beauty*, and not for every common Woman; as Martial, Huntresses, grave Matrones, or other stayed Women, inclining to grossness, as the other tend to slenderness, and because all the other proportions depend upon these two (as may easily be proved by Geometrical lines) I thought good to set them down first, as a Rule and Direction for the rest, which I purpose now to handle, with the same Method I did the other two: Least otherwise, it might happily be thought, that these proportions were made by chance; wherefore all the particulars are to be framed, answerable to the *Nature* of such Bodies as they resemble; otherwise some one disproportionable and unsuitable Part, will cause as great, or rather a greater blemish in a beautifull Body: *As a Tuscan Capital, in a Corinthian Cullumne; or a Phrigian note mixed with a Dorick.*

*The Proportion of a Woman of Ten heads.*

THE proportion of a Woman of ten Heads in length, is thus measured, between the top of the *Head* and the *Sole* of the *Foot*; is ten times as much as between the *Chinn*, and the top of the *Head*, thence to the *Privities* is half.



*The Proportion of a woman of Nine Faces.*

IT was not without just cause that *Vitruvius* in the First of his *Architecture*, distinguishing the manner of *Temples* by their several Orders; dedicated the *Ionick* Order to the goddesses *Juno*, as being slenderer then the *Dorick*, and more substantial then the *Corinthian*: Considering no doubt very wisely; that this goddess was not naturally so Grave as *Vesta* nor yet so slender and beautifull as *Venus*; notwithstanding she carrieth a *Matrone* like Beauty, full of *State* and *Majesty*, for which cause also, I apply this Portion of *Nine Faces* unto her, as most properly belonging unto her, being inferiour in Beauty to the proportion of *Venus*, and yet the most beautifull amongst the *Matrone*-like, wherein *Majesty* and *Grace* ought to be represented. Moreover this proportion may be applied unto *Queenes of Middle-age*; or unto any other honest, fair and grave women; and doth most properly appertain to our Lady.

*Of the Proportion of a Woman of Nine Heads.*

THOUGH I might describe divers other proportions of Bodies (albeit of small worth in respect of the principal) yet I purpose to pretermit them, as well for their small use, as for brevities sake, wherefore concluding the Principal and most Regular proportions, I come to the rest, and First to that of *Nine Heads*, which being very slender and comely, as representing the third Degree of Beauty, may be given not only to *Minerva*, but also to *Diana* for her *swiftness* and *agility*, as also to the *Nymphs* of the Rivers, and to the *Muses*, though with divers attire, in regard of their place. This proportion

is

is from the top of the *head* to the *Chinn*, a Ninth Part of the length. The *Face* from the Root of the *hair*, to the *Chinn*, may be either a tenth or eleventh Part, as shall please the Painter. *This divided into Three equal Parts, the first gives the Fore-head, the second the Nose, the third the Chinn.*

*The Proportion of a Woman of seven heads.*

IT was not without good Ground, that the old *Græcians* made the goddess *Vesta* but Seven heads high; because this proportion is *Grave* and *Matrone* like, and therefore was attributed to the Earth, the common Parent of all things. Besides you may give it to any other goddess, which hath any kind of resemblance with the Earth, as also to the more staid and antient sort of Women, wherefore it were a great oversight to give a slender and delicate proportion to the *Sibills* or other *Grave* and *Sage Prophetesses*; as it were likewise to make a *Prophet* with such a proportion as belongeth to young Men.

*A Child of six Heads is thus measured, dividing the body into six equal parts, whereof the Head must be one.*

*A Child of five Heads is thus measured, dividing the body into five equal parts, whereof the Head must be one.*

*A Child of four Heads is thus measured, dividing the body into four equal parts, whereof the Head must be one.*

*The Reason why I have not given Descriptions or Rules, upon all the particular designs upon the Plates, farther then the Side-way, or Triangle, Fore-right or Fore-shortening, is because I think it unnecessary, unless you could force Dame Nature to observe the same method, with them antient Rules of Alberta Durera or Cousine, the grand*

*reason is because every Print shews its designe of it self, to any one that is Ingenious, observing the due distances, and lights.*

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## The Definition of Painting.

**P**ainting is an Art which with proportionable Lines, and Colours answerable to the life, by observing the Perspective Light, doth so imitate the Nature of corporal things, that it not only representeth the thicknes and tendernes thereof upon a Flat, but also their actions, and gestures, expressing moreover divers affections and passions of the Mind.

For the better unfolding of which Definition we must understand that every Natural thing consisteth of Matter and Forme : Whereunto Genus and Difference answer in Logick, whence the Logicians say, that Genus declareth the Essence of things, and Difference of their Forme and Essential Qualitys. Wherefore I think it not amiss, according to this Doctrine, to lay open the above named Definition, by expounding all the Differences whereby the Art of Painting is distinguished from all other Arts and Sciences; the Genus then in Painting is Art, which is proved by two Reasons. The First is drawn from the Definition of Art it self, which is nothing else but a sure and certain Rule of things to be made, the Second from the Natural things themselves, which are a Rule and Measure to the greater Part of the Arts and Sciences, in the World (insomuch as they are Gods creatures, and consequently indued with all such Perfection as their Nature is capable of, and therefore may well be a certain Rule to Artificial things.

Hence



Hence it appeareth that *Painting* is an *Art*, because it imitateth *natural* things most precisely; and is the counterfeiter and (as it were) the very *Ape* of *nature*; whose *Quantity*, *Eminency* and *Colours*, it ever striveth to imitate, performing the same by the help of *Geometry*, *Arithmetick*, *Perspective*, and *Natural Philosophy*, with most Infallible Demonstrations, but because of *Arts* some be *Liberal*, and some *Mechanical*, it shall not be amiss, to shew amongst which of them *Painting* ought to be numbred. Now *Pliny* calleth it plainly a liberal *Art*, which authority of his may be proved by reason, for although the *Painter* cannot attain to his end, but by working both with his *hand* and *pencil*, yet there is so little pains and labour bestowed in this Exercise, that there is no Ingenious Man in the World, unto whose *Nature* it is not most agreeable, and infinitely pleasant.

*Painting is a Liberal Art.*

For we read of the French King *Francis*, the First of that name, that he oftentimes delighted to handle the *pencil*, by *exercising*, *drawing* and *painting*; the like whereof is reported of divers other Princes, as well antient as late; amongst whom I may not conceal *Charles Emanuel* Duke of *Savoy*, who (in all other Heroical *Vertues*, so amongst other *Liberal Sciences* in this) imitated and most happily equalled, that great King *Francis* his *Grand-father* by the *Mothers* side, so that in these and the like *Exercises*, nothing is *Base* or *Mechanical*, but all *Noble* and *Ingenious*.

For to say the truth; what Prince or Ingenious Man is there, which taketh not delight with his *pencil* to imitate *God* in *nature*, so far forth as he is able: Farthermore it cannot be denied, but that the *Geometrician* also worketh with the *Hand*, by drawing *Lines*, as *Circles*, *Triangles*, *Quadrangles* and such like *Figures*; neither yet did ever any Man therefore account

*Geometry* a *Mechanical Art*, because the Hand-labour therein imployed is so sleight, that it were an absurdity in respect thereof, to reckon it a base condition.

The like reason is there of *painting*, the Practice whereof, doth so little weary a Man, that he which was *Noble* before, cannot justly be reputed *Base* by exercising the same; but if besides all this, we shall farther consider, that *Painting* is subordinate to the *Perspectives*, to *Natural philosophy*, and *Geometry* (all which out of question are *Liberal Sciences*) and moreover, that it hath certain Demonstrable conclusions, deduced from the First and immediate Principalls thereof, we must needs conclude that it is a *Liberal Art*.

Now what kind of *Liberal Arts* it is (to omit all other proofs) may easily appear by the foresaid Definition; where it is first said, that it representeth upon a plain, the Thickness and roundness of Bodily things, not excepting any, either Natural or Artificial, whereby we may gather that it belongeth to the Painter also to represent Pallaces, Temples, and all other things made by the hand of the Artificer.

Moreover it is said, that it representeth the Figure upon a Plane, and hereby it is distinguished from *Carving* (though not *Essentially*, but onely *Accidentally* (as it is said in the Proem) by reason of the diversity of the matter, wherein both of them represent natural things which imitateth Nature likewise, though it express the perfect roundness of the Bodies as they are created of God, whereas the Painter representeth them upon a Flat Superficies: Which is one of the chiefeft reasons, why *Painting* hath ever been preferred before *Carving*.

Because by meer *Art* upon a *Flat*, where it findeth only length, and breadth, it representeth to the Eye  
the

the Third Dimension, which is roundness and thickness; and so maketh the Body to appear upon a *Flat*; where naturally it is not.

Furthermore it is added in the Definition: that it representeth the *Bodily Motions*, which is most *Motion* true, for in that most *Famous Picture* of the last judgement, done by the Hand of the *Divine Michael Angelo*, in the Popes Chappel at *Rome*, who sees not what motions may be expressed in Bodies, and in what order they may be placed; there may you see our *Lady*, *St. John*, and the other *Saints* represented with great Fear; whilest they beheld *Christ* moved with indignation against the wicked, who seem to fly away and hide themselves behind *his* Back, that they might not behold *his* angry countenance wholly inflamed with indignation: There shall you behold the guilty; who being astonished with Fear, and not able to indure *his* glorious presence, seek dark Dens and deep Caves to hide themselves in.

On the one side, you shall find the *Saints* seeming (in a Sort) to finish the *Act* of the resurrection, ascending up into the *Aire*, to be placed at the right hand of *Christ*: On the other side you would think you saw the *Angels* coming down from *Heaven* with the Standard of the *Cross*: And on the other, carrying the Blessed *Soules* to be placed at the right hand of *God*.

And to conclude there is no corporal *Motion*, whether it be forwards, or backwards; on the right hand, or on the left; upwards; or downwards; which may not be seen expressed, in this most artificial and admirable *Picture*, but if we shall farther consider the passions and motions of the *Mind*, whereof the Definition maketh mention likewise, they are also to be found in the same work, with no less *Art* then admiration to the beholder, especially in *Christ*



*in whom you may see Wrath and Indignation so kindled, that he seemeth to be altogether incensed therewith.*

*In the Saints  
a reverent in  
the damned, a  
desperate fear.*

Again both in the *Saints*, and damned *Soules*, being *appalled*, and *confused*, is most lively expressed, an exceeding dread and horror of the wrathfull *Judge*, and in a Word, many motions as well of the Body, as of the Mind, are to be found in the Works of this *Divine Bonaraot*, of the rare *Raphael Urbine*, and of other worthy *Painters* both old and new, as well of love as hatred, sadness as mirth, and all other *passions* of the Mind.

All which representations are after declared in that part of the Definition, where it is said, that *Proportion*. *Painting*, with proportionable lines maketh, &c. where we must Note that the *Painter* in his descriptions, doth not draw lines at randome, without *Rule*, *Proportion*, or *Art*, (as some vainly have imagined) since the *Arrantest Bunglers* that are, proceed with some little Method, and although *Horace* in his book *de Arte Poetica* saith: that

*The Poet and the Painter, hath like Patent to invent,  
A Story and dispose the same as shall him best content.*

Yet that is thus to be understood, that it is lawful for him to express a *Figure*, in what action he list, as in shewing *Julius Cæsar* in the *Pharsalian Warr*, in some action, which peradventure he never did; as setting him in the *Vaward*, when he perchance was found in the *Rereward*, or representing him encouraging his Souldiers to *Valour* which perchance he never did; this only excepted the *Painter* is bound to proceed in all his Works according to *proportion* and *art*. Wherefore before you begin to *Stell*, delineate or *trick out* the *proportion* of a Man, you ought to know his

his true *Quantity* and *Stature* for it were a gross absurdity to make a Man of the length of Eight Faces; which is of Nine or Ten, besides this; we ought to know what *proportion* the *Fore-head* hath with the *Nose*; the *Nose* with the *Mouth* and the *Chinn*, the whole *Face* with the *Neck*, and in a Word to learn the true proportions of all things *natural* and *artificial*.

Now because it seemeth a matter of great difficulty, and almost impossible for one Man to attain to the full perfection of all this *Knowledge*, we may propose unto us the Example of the most judicious *Apelles*, who when he undertook any special piece of *Work*, wherein he meant to shew the utmost of his Skill, he used to Hang it forth to publique View, hiding himself behind, to the end he might hearken what every Mans Judgement was, concerning the *proportion* and *Workman-ship* thereof, and according to each mans censure of such things as appertained to their *professions*. He still corrected his work, as on the contrary side, he did *confute* and *reprehend* the censures of such as would take upon them to give their judgements of such things as appertained not to their *professions* (as did the *Shoemaker*, who not content to find Fault with the *Shoos* of one of his *Pictures*, would needs censure the other Parts) unto whom he answered, *ne Sutor ultra crepidam*.

Furthermore the *Painter* ought to observe an *Order* and *Method* in those proportionable lines therein; imitating *Nature* in her proceedings; who first presupposeth *Matter* being a thing void of *Forme*, *Beauty*, *Bound*, or *Limit*, and afterwards bringeth in the *Forme*, which is a beautifull and limited thing, in like sort the *Painter* taking a *Panel* or *Cloth* (in the Surface whereof there is nothing


Let not the Shoemaker presume beyond his Last.

but a *Flat* and plain *Super-ficies*, without Beauty or Limitation of parts) he *trimmeth*, *primeth*, and *limiteth* it by tracing thereon a *Man*, a *Horse*, or a *Cullumne*, *forming* and *tricking* the true proportion thereof, and (in a Word) *Imitating* by lines, the *Nature* of the thing to be painted in breadth, length, or thickness.

*Rule.* And because in this place there falleth out a certain Precept of *Michael Angelo*, much for our purpose, I will not conceal it, leaving the farther interpretation and understanding thereof, to the judicious Reader. It is reported then that *Michael Angelo* upon a time gave this observation to the Painter *Marius de Scina* his Schollar, that he should alwayes make a Figure *Pyramidal*, *Serpent* like, and multiplyed by One Two and Three, in which precept (in my Opinion) the whole *Mystery* of the Art consisteth, for the greatest *Grace* and *Life* that a *Picture* can have, is, that it expresse motion; which the Painters call the *Spirit* of a *Picture*. Now there is no *Form* so fit to expresse this Motion, as that of the *Flame* of *Fire*, which according to *Aristotle*, and the other Philosophers is an *Element* most active of all others, because the *Forme* of the *Flame* thereof is most apt for Motion, for it hath a *Conus* or *Sharp Point* wherewith it seemeth to divide the *Aire* that so it may ascend to his proper *Sphere*, so that a *Picture* having this forme will be most beautifull.

Now this is to be understood after two sorts: either that the *Conus* of the *Piramis* be placed upwards, and the *Base* downwards as in the *Fire*, or else contrarywise, with the *Base* upwards, and the *Conus* downwards: In the First it expresseth the width and largeness of a *Picture*, about the *Leggs* and *Garments* below, shewing it slender above, *Pyramidal Wise*, by discovering one *Shoulder*, and hiding the other, which is shortened by the turning of the *Body*; in the Second it sheweth



sheweth the *Figure* biggest in the upper Parts, by representing either both the *Shoulders*, or both the *Armes*; shewing one *Legg* and hiding the other, or both of them after one sort, as the Skilfull *Painter* shall judge fittest for his purpose, so that his meaning is, that it should resemble the *Forme* of the letter S placed right, or else turned the wrong way as  because then it hath his *Beauty*: Neither ought he only to observe this *Forme* in the whole Body, but even in every Part; so that in the *Leggs*, when a *Muscle* is raised outwards on the one side, that which answereth directly on the contrary side, must be drawn in and hid, (as may be seene in the life)

The last part of Michael Angelo his *Observation* was, that a Picture ought to be multiplied by One, Two, and Three, and herein consisteth the chiefeft Skill of that Proportion for the Diameter of the biggest place between the Knee and the Foot is double to the least, and the largest part of the Thigh triple.

But to return to the Definition; that part Colours. remaineth to be expounded, wherein it is said that *Painting* representeth things with *Colours*, like to the *Life*; whence it is to be marked that the *Artificial painter* ought to proceed according to the course of *Nature*, who first presupposeth *Matter* (as the *Philosophers* hold) unto which it addeth a *Forme*, but because to create the *Substances* of things proceedeth from an infinite power, which is not found in any creature (as the *Divines* teach) the *Painter* must take something instead of *Matter*, namely *Quantity* proportioned; which is the *Matter* of painting, here then the *Painter* must The Matter of Painting. needs understand that proportioned *Quantity*, and *Quantity* delineated, are all one, and that the same is the *Material Substance* of *Painting*, for he must consider, that although he be never so Skilfull in the use of his *Colours*, and yet lacketh this *Delineation*, he is

unfurnished of the Principal Matter of his *Art*, and consequently of the substantial part thereof, neither let any Man imagine that hereby I go about to diminish the power and vertue of colour, for if all particular Men should differ one from another in Matter alone (wherein out of all doubt all agree) then all Men must needs be one, and so that most acceptable variety of so many particulars as are now in the world would be wanting (which variety is caused by those

*Individuantes  
Qualitates.*

Seven particularities which the Philosophers call particularizing Qualities,) that is Seven substantial accidents, which cause the particularity and singularity of substances, so if the Painter should only Pourtrait out a Man in just Symetry agreeable to Nature; certainly this Man would never be sufficiently distinguished by his mere Quantity: But when unto this proportioned Quantity he shall farther add Colour, then he giveth the last forme and perfection to the Figure: Insomuch, that whosoever beholdeth it may be able to say, this is the Picture of the Emperour Charles the Fifth, or of Philip his Sonne, it is the picture of a Melancholick, Flegmatick, Sanguine, or Choleric Fellow, of one in love, or in fear of a bashfull young Man, &c. and to conclude the picture will attain to such perfection, that the party counterfeited may easily be known thereby: Wherefore I advise the Painter to be very skilfull in the use of Colours, as in that wherein consisteth the whole perfection of his Art.

*Painting and  
Carving dif-  
fer.*

And in this point alone is painting distinguished from all other Arts, and chiefly from Carving, because in precise imitation of the life the painter performeth much more then the Carver is able, for the Carvers intent is only to give the self same quantity to his Figure which his Natural pattern hath, so that his special purpose is to make the Figure equal to the life; which cannot therefore be said to be perfectly

fectly like thereunto, because *Philosophy* teacheth us that Similitude, is not properly found in *Quantity*; but in *Quality* only: now the *Colour* which the *Painter* useth, giving thereby the *Similitude* and proper *Resemblance* to his counterfeits, is most truly and properly *Quality*, and although we usually call one thing like to another, when it hath the same *Quantity*; yet this is an improper speech, for if we should speak properly, we should call it *Equal* and not *Like*, wherefore Similitude is found only in *Quality*, and *Equality*, which the *Carver* considereth only in *Quantity*, but the *Painter* doth not only endeavour to give the true and just quantity to his figure, by making it equal to the life; as the *carver* doth, but moreover addeth quality with his colours, giving thereby both quantity and similitude, which (as hath been proved) the *carver* cannot do.

Now the *Painter* expresseth two things with his colour: First the colour of the thing, whether it be artificial or natural, which he doth with the like colour, as the colour of a blew garment with artificial blew, or the green colour of a Tree with a like green: Secondly he expresseth the light of the *Sun*, or any other bright Body apt to lighten or manifest the colours, and because colour cannot be seen without light, being nothing else (as the *Philosophers* teach) but the extreame *Superficies* of a dark untransparent Body lightned, I hold it expedient for him that will prove exquisite in the use thereof, to be most diligent in searching out the effects of light, when it enlighthneth colour, which who so doth seriously consider, shall express all those effects with an admirable *Grace*; and although the blew be equally dispersed through all the Parts of a garment, so that there is no more in one part then in another: Yet notwithstanding when it is illustrated



by any light, it causeth one kind of brightness in that part where it striketh more *vehemently*, then another, in that part, where it shineth *less*.

Now when the *Painter* would imitate this *blew* thus lightned, he shall take his *artificial blew* colour, counterfeiting therewith the *blew* of the *garment*, but when he would expresse the light, wherewith the *blew* seems clearer, he must mix so much *white* with his *blew*, as he findeth light in that part of the *garment*, where the light striketh with greater force, considering afterwards the other part of the *garment*, where there is not so much light, and shall mingle *less white* with his *blew* proportionably, and so shall he proceed with the like discretion in all the other parts: and where the light falleth not so vehemently, but only by reflexion there he shall mix so much shadow with his *blew*, as shall seem sufficient to represent that light, loosing it self as it were by degrees, provided alwayes, that where the light is *less darkned*, there he place his *shadow*,

In which judicious expressing of the effects of light together with the colours, *Raphael Urbine*, *Leonard Vincent*, *Antonius de Coreggio* and *Titian* were most admirable, handling them with so great *discretion* and *judgement*, that their *Pictures* seemed rather *natural*, then *artificial*; the reason whereof the vulgar *Eye* cannot conceive, notwithstanding these excellent *Masters* expressed their chiefest *art* therein, considering with themselves that the light falling upon the *flesh* caused these and such like effects, in which kind *Titian* excelled the rest, who as well to shew his great *Skill* therein, as to merit commendation, used to cozen and deceive Mens *Eyes*, the like did *Michael Angelo* who to make proof of his singular insight in the *Anatomy*, inclined somewhat toward the

Extream, by raising up his *Muscles* a little too hard, and by this means shewed the *eminencies* and *risings*, in which naturally they were small, as in the Body of *Christ*, &c.

Again *Titian* to make known his art in *lights* and *shadows*, when he would express the lightest part of the Body used to add a little too much *white*, making it much *lighter* then his *pattern*, and in the obscure parts, where the *light* fell by *reflexion*, a little too much *shadow*, in resemblance of the *decay* of the *light* in that part of the Body, and so his work seemeth to be much raised, and deceive the *sight*, for the *light* which cometh to the *Eye*, in a *Pyramidal forme* (as shall be shewed in the ensuing discourse) cometh with a *blunter* and *bigger Angle*, and so is seen more evidently, whence ariseth a wonderfull *eminency*, the especial cause whereof is, because there is much more *shadow* then needeth in that part, where the *light* decayeth most, so that the *visual lines* failing, that part cometh to the *Eye* in an *accuter* and *sharper angle*, and therefore cannot be seen so perfectly, insomuch that that part seemeth to fly inwards, and stand farther off. Thus when the Four parts of a Body are much raised, and the hinder fly sufficiently inwards, there appeareth a very great heightning, which giveth a wonderfull Spirit, and after this sort *Titian* beguiled the Eyes of such as beheld his most admirable works.

### Of the Vertue of Light.

**L**ight hath so great force in *Pictures*, that (in my judgement) therein consisteth the whole *grace* thereof, if it be well understood, an contrarywise, the *disgrace* if it be not perceived, and evident example whereof we may see in a Body proportionably drawn,

which being yet without his *lights*, sheweth very *beautifull*, so far forth as it is *wrought*, but if afterwards it shall be *shadowed* without judgement and art, so that the *shadowes* be confusedly placed where the *lights* ought to be, and contrarywise the *lights* where the Middle of the *shadowes* should be, and the *concavities* and *convexities* disorderly suited, without any Imitation of *Nature* it were better it had never been either *drawn* or *lightened*, whereas having *lights* well disposed, it doth not only add perfection to the *draught* but so sets it off from the *Flat* that it seems to be *imbossed*.

And in this *vertue* and *power* consisteth the chiefest excellency of the *Painter*: Insomuch as this point most properly concerneth him, by making his *counterfeits* seem to be as much raised, by reason of the striking of the *light*, as they are indeed in the *Carvers work*, by reason of the matter, which (as all Men know) hath *height* and *depth*, the *right side* and the *left*, the *fore-part* and the *hinder*, wherefore they say that the thing which the *Carver* intendeth to make, is in the *Marble*, which afterwards becometh *good* or *bad*, by *cutting* and *forming*, but to return to the *light*, I say this moreover, that although it be of such *efficacy*, that it *diminisheth* the *grace* of the *draught*, where it *wanteth* (as is said) yet the *Inartificialness* of the *draught* cannot disgrace it, whence we see, that if the *lights* be well and *proportionably* bestowed throughout a *Body*, which is *ill proportioned* and without *Muscles*, it contenteth the *Eye* of the beholder somewhat the more, by moving him to a desire of seeing the *Muscles* and other necessary parts, in such a *Body* as in the *Pictures* of *Bernard*, *Zenale*, *Friviliano*, viz. the glorious resurrection of *Christ* painted by him, over the *Gate* in the *Covent* of the *Church of Grace* in *Milane*,  
and



and many other Histories of his doing as well in colours, as in *black and white*, in the same place.

Wherein may be seen *Pictures*, made without *Muscles*, and other necessary accomplishments, for the more gracious representation of *Eye-pleasing perfection*, but yet well placed, and with their *lights*, most *artificially* disposed in their *places*, insomuch that they seem to be *imbossed* outwards, such is the force of these *lights* in which you shall also find admirable *perspectives* and *foreshortnings*, wholly proceeding from the orderly disposing of the *lights*, without which these draughts would have proved *imperfect*, loosing much of that grace, although they were well placed, so that we find many *Painters*, who being ignorant of the art of *proportions*, only by a little practice, in disposing their *lights* in some tolerable sort, have notwithstanding been reputed good *Artists*; which commendation they deserve not, because they neither have the *Art* of *perspectives* nor the true representing of any of the *lights*.

Now for an Example of the true art of exquisite bestowing of these *lights*, that *Peece* of *Le: Vincent* amongst many others, may serve us, instead of all the rest of his well *lightned Pictures*, which is now to be found in *St. Francis Church* in *Milane*, where he hath painted the conception of our *Lady*, which (to omit other excellencies therein) is most singular in this point, for the perfection of *lights*, those two *peeses* done by the hand of *Antonio Correggio* are most admirable, which are yet to be seen in the same *City*, with *Cavalier Leon: Aretino*, in one whereof is painted fair *Jo*, with *Jupiter* upon a *Cloud*, and in the other *Danae* and *Jupiter* descending into her lap in the forme of a *golden shower*, with *Cupid* and other *Loves*, having their *lights* so well disposed, that I dare boldly say,

no other *Painter* is able to match him in *colouring* and *lightning*; which *Degrees* were sent him out of *Spain*; from his *Sonne Pompey* a *carver*. Moreover *Michael Angelo*, and *Raphael Urbine*, the *Fathers* and *Masters* of *painting* are reputed most rare and *divine* in *lights*, out of whose *Schooles* I may truly say, almost all the famous *Painters* of *Italy* have attained to the worth of their *fame*.

Now then insomuch as these *lights*, are of so great *vertue*, we ought to use all diligence for the perfect attaining to the *knowledge* thereof, by applying them to our *draughts*, as is shewed, insomuch as the *art* of *proportion*, *motion* and *foreshortning*, hath but small use or commendation in a *Painter*, without the *knowledge* of these *lights*, found out by *reason* and *art*, and not taken by bare imitation from the *imbossed models*, under a false apprehension of the *light*, without order or distance, as also in the *lines* and *superficies* of *Bodies*: wherefore they prove false, and altogether contrary to the *rules* of *art*. And thus much I thought good to note concerning this point purposing now to begin the treatise of *light* it self, by the assistance of him who inlightneth the understanding of such as submit themselves unto him, with a pure *Mind* wholly prepared for the receiving of so *divine* beams.

### Of the Necessity of Light.

IT appeareth by that which hath been hitherto spoken, that a peece of *painting* drawn in *proportion* having his true *motion*, and put in *colours* without the *lights*, is like a *Body* in the *dark*, of whose *Quantity* or *Quality* a *Man* cannot judge, save only by the help of his understanding, that is by that *inward* concept he hath of the thing, and not by any *outward*, insomuch as it is hidden from the *external light*, which  
con-

concurring with the *internal*, by means of the *Beams* proceeding from the *Eye*, makes the diversity of Bodies known to the understanding, after the same manner, as they receive their light naturally.

*Wherefore*, I will handle the lights, saying nothing of the shadows, although they be handled together with them, for the shadows do necessarily follow the lights, being caused by the decay of the light, taking so much the more force, by how much the more forcibly the light striketh upon the Body, whence ariseth that exceeding great raising and heightning of a natural plain, in a Body receiving the light according to his proper nature.

And by this we shall know, how the lights, reflections, and natural rebating of the lights, do vary, according to the diversity of the Bodies, by altering them as shall be said, wherein also we shall see the very perfection of the art; for without this, neither order, forme, proportion, motion, composition, or figure, can attain to their perfection, like unto a Body without situation or spirit, or to counterfeit Starrs without the light of the Sun, giving them their brightness answerable to their qualities, whereby they may be seen. But now as touching my proposed matter, I will First handle the nature of light, and afterwards (by the help of *Natural Philosophy* and the *Opticks*, being the First part of the *perspectives*) I will speak in general of the primary and secondary lights, then of direct and reflected lights, afterwards how by *Mathematical* reasons, divers distinct lights may be seen, by reason of the variety of the Bodies, and finally of the qualities of things appertaining thereunto, how it may be understood in all things, and in the *Elements* themselves.



*Of the Nature of Light.*

THIS Word *Light* is diversly taken : *First* and principally it signifieth the *Image* of that *Divine Nature* which is the *Sonne of God*, and the *brightness* thereof, which the *Platonicks* called the *Image of the divine mind*. *Secondly* the comfortable operation of the *Holy Ghost* : *Thirdly* that *divine vertue*, which being diffused through all the creatures, is in Men their *divine grace*, and in all other living creatures, that *power* whereby they are *preserved* and *defended*, as that of the *Seraphims* according to *Dionysius* : *Fourthly* that *intelligence* in the *Angels*, which breedeth that *Joy* in them, which passeth our understanding, yet diversly received, according to the diversity of the intelligence apprehending it, as *Marcilius Ficinus* upon *Plato* noteth : *Fifthly* in the *Heavenly Bodies* it causeth abundance of *Life*, signifying an *effectual propagation*, and *visible brightness* in the *Fire*, with a certain accidentall *power* proceeding from the same : *Sixthly* it is taken in Men for the *Light* of their *agent*, understanding, which illuminateth their *Patient* or passable understanding ; (and in a Word) for the discourse of *reason*, and the knowledge of divine things : *Last of all* it signifyeth a *quality* proceeding from the *Sun* or the *Fire*, which so discovereth *colours*, that they may be seen, and this (as the *Peripateticks* say) is the cause of *Formal Reason*, whereby coloured things are seen, whose *Shapes* and *Images* pass to the *phantasie*, and especially enlighten the *Eyes*, in which the *Image* is formed, which *First* passeth to the *common sense*, afterwards to the *phantasie*, and last of all to the *understanding*, this *Light* is dispersed and extended unto all Bodies that are openly proposed unto it, in which colour, and a beautifull resplendency of thick and

and dark Bodies is discovered (as the *Platonicks* speak) caused by this *light*, together with certain *beneficent* and *generative vertues*. But where the *Sun-beams* fall not, and are not at all disperſed, there (the *beams* of the *Eye* being restrained) remaineth a *dark colour*, which displeaseth, and evil effecteth the *mind*, so that all things according to their *capacity*, feel the power of the *light*, which joyning all Creatures to it self by this lively *heat*, and piercing through them all, giveth to each of them his proper *Quality* and *Vertue*.

Whence those who are *judicious* in this *Art*, use to give *lights* to all things after one and the self same manner; insomuch as we see, that the *Sun* rising above our *Horizon*, *lightneth* all things in an instant, the reason whereof is, because the *light* hath no contrary which might hinder it, with his *action*. Wherefore it performeth his operations in the *Air*, in an instant.

And hereunto appertaineth that, which the *Philosophers* say concerning the darkness of the *Night*, that it is not caused of any dark or black colour, which coloureth the *Air*, but only by the absence of the *Sun*, whose presence and brightness equally *lightneth* our whole *Hemisphere*, and would in like sort *lighten* the whole *Earth*, together with all compound Bodies, if they were transparent as the *Air* is, but being *Opake*, thick and corpulent, they receive not the *light* in his perfect brightness, save only in that part which is directly opposite to the *Sun*, and therefore in this our *Hemisphere* (because the *Sun* never passeth perpendicularly over our *Zenith*) the *Earth* can never be so *lightened*, but that one side or other of it will be *shadowed*, which happeneth unto those parts, which lye directly under the *equinoctial line*, where the *Sun* at Noon doth so *lighten* the *Earth*, and the inhabitants, that it giveth *light* to the whole circum-

ference of round Bodies, and there is no shadow seen unto the very Feet. Whence the judicious in this Art, forbid us to give lights in a picture unto all Bodies, after one and the self same manner.

But besides this consideration of the light illuminating, and the Earth with all earthly Bodies lightned, there is another more forcible reason drawn from the grounds of the *Mathematicks*, viz. from the visual lines of perspective, together with the Eye, for the better understanding whereof we must note, that Three things concur to our sight, the visual lines, the coloured Body, and the faculty of seeing, which is in our Eye, the visual lines lightned ( which are the proper Matter and subject of the perspectives ) come to our Eye in a *Pyramidal* Forme, the Base of which *Pyramid* resteth in the Object, and the *conus* or *angle* thereof, cometh to our Eye more blunt and obtuse: And hereby we see the Object more plainly and distinctly; but if the Object be afar off, the *conus* or *angle* of the *Pyramid* comes to the Eye sharper and lesser, and then our Eye cannot discern it so clearly as otherwise it would.

Secondly it is to be noted, that the Object cometh not to our Eye, but the visible species or shapes are diffused through the clearness of the Air unto the Eye, which species are nothing else but certain Images, like unto those which we see in a glass, when a Man or any thing else standing against it, is represented therein.

And if the coloured Body or Object stand neer to this Image, it comes to our Eye in the same quantity and bigness of the angle of the *Pyramid*: Now because this angle comes to our Eye in an obtuse and blunt form, the Image also seems great, and so is discerned more distinctly, but when the coloured Object stands afar off, the Image comes to the Eye in a very small and slender angle, and there-



therefore filleth not the *Eye*, but wavereth in such fort, that it cannot be *clearly* and *distinctly* discerned. As touching the Third I have no more to say, but that the *faculty* of seeing is reduced into *Art*, being formed by the concurring of the other Two things required before, *viz.* the *visual lines*, (without which the *Eye* cannot see) and the *Image* of the coloured Body, which informeth the *Eye*, by reducing it from *meer ability* into *act*, and informing it more perfectly with a great *Image*, by performing his operations better, and causing the thing to be seen more *apparently* and *distinctly*: whereas with the small *Image* of a thing too far distant, the *Eye* cannot be so well informed, and therefore it cannot see the thing *perfectly*.

*From which grounds, I draw these Two reasons, why the self same Body cannot be lightned equally in all places.*

The First is because the *light* doth not with all his *brightness* illuminate any more then that part, which is directly opposite to it, being not able to *illustrate* the other parts so *perfectly*, by reason of the *Nature* of the dark *Terrene*, and gross Body, which so hindreth the *beams*, that they cannot *pierce inwards*, and performe their *effects perfectly*.

The Second reason is taken from the *Nature* of our *Eye*, for as the First part of the Body is *seen* and *placed* nearest the *Eye*, comes unto it with a *bigger angle*, so is it also seen more *distinctly*, because it is more *lightned*, but the Second part thereof, being farther off, comes to the *Eye* in a *lesser angle*, and being less *lightned*, is not so plainly seen as the First, and by this rule, the Third part will be *obscurer*, and so the Fourth *proportionably* untill the *Eye* can see no farther.

Now if you ask me what the *Painter* ought to do, when he would *paint Two, Three, or Four Men*, standing one behind another, all of them *equally* receiving

the *light*, I answer alwayes according to the former *Doctrine*, that although they be equally *lightned*, yet we must *paint* the *Second* which is farther off from the *Eye* darker, and the *Third* more then him, and the *Fourth* most of all, &c. untill our *Eye* can see no more.

*The reason is because the Second standing farther off, cometh to the Eye with a lesser angle, wherefore he cannot be seen so evidently as the First, the same reason there is of the Third, &c.*

The same is also meant *side-long*, wherefore whatsoever *Painters* have observed this *Doctrine*, have become excellent, and nothing *inferiour* to the chief *Masters* of this *Art*, as *Le: Vincent* with divers others named before, together with *Jac: Tintoretto* *Marco de Scina*, *Frederick Barozzi* of *Urbine*, *Paulus Caliarus* of *Verona*, *Lucas Gangiasus*, the *Bassans*, and *Ambrose Figinus*.

Now the whole *Doctrine* delivered in this present *Chapter* is (for the most part) taken out of *Aristotle*, *Alhazen*, *Vitello*, *Thomas Aquinas*, and (to conclude) out of all the best *Philosophers* and *Divines*, (whose *Opinions* I approve of) and thus much may be spoken for the *Opinions* of other *Men*.

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## Of the Vertue and Efficacy of Motion.

IT is generally confessed of all *Men*, that all such *Motions* in *Pictures*, as do most neerly resemble the *Life*, are exceeding pleasant, and contrary-wise those that which do farthest dissent from the same, are void of all *gracious Beauty*, committing the like discord in *Nature*, which untuned strings do in an *instrument*. Neither do these *motions* thus *lively* imitating *Nature* in *Pictures*, breed only an *Eye-pleasing contentment*,

teniment, but do also performe the self same effects, which the *natural* do, for as he which laugheth, mourneth, or is otherwise effected, doth *naturally* move the beholders to the self same passion, of mirth or sorrow, so a picture artificially expressing the true *natural* motions, will (surely) procure laughter when it laugheth, pensiveness when it is grieved &c. And that which is more, will cause the beholder to wonder, when it wondereth to desire a beautiful young woman to his Wife, when he seeth her painted naked, to have a Fellow feeling when it is afflicted, to have an appetite, when he seeth it eating of dainties, to fall a sleep at the sight of a sweet sleeping Picture, to be moved and wax furious when he beholdeth a battel most lively represented, and to be stirred with disdain and wrath at the sight of shameful and dishonest actions, All which points are (in truth) worthy of no less admiration than those miracles of the antient Musicians, who with the variety of their melodious harmony, were wont to stir Men up to wrath and indignation, love, warr, honourable attempts, and all other affections as they listed; or those strange conclusions of the Mathematical motions, recorded of those undoubted wise Men, who made statues to move of their own accord, as those of *Dedalus*, which (as *Homer* writeth) came to the battel themselves, or *Vulcanus Tripodes* mentioned by *Aristotle*, or those gilded Servitors which walking up and down at the feast of *Farbas* the *Gymnosophist*, served at the Table, or those antient ones of *Mercury* in *Ægypt*, which spake, &c.

In which kind of artificial motions, *Leonard Vincent* was very skilfull, (who as his Scholar Signior *Francesco Melizi* the great Limner verifies) invented a certain conceited matter, whereof he used to make Birds that would fly into the Air, and made a most artificial Lyon, which being brought into



a large Hall before Francis the First King of France of that name, after he had a while walked up and down stood still opening his Breast, which was all full of Lillies and other flowers of divers sorts, at which sight the King and other spectators were rapt with so great admiration that they then easily believed, that Architas Tarentinus his wooden Dove flew, that the brazen Diomedes, mentioned by Cassiodorus, did sound a Trumpet, that a Serpent of the same metal, was heard to hiss, that certain Birds sung, and that Albertus Magnus his brazen Head spake to St. Thomas of Aquine, which he brake, because he thought it the Devil, whereas indeed it was a meer Mathematical invention (as is most manifest.)

But to return thither where I left, I am of Opinion that in so much as these Motions are so Potent in affecting our Minds, when they be most artificially counterfeited, we ought for our bettering in the knowledge thereof, to propose unto us the example of Leonard Vincent above all others: Of whom it is reported, that he would never express any motion in a Picture, before he had first carefully beheld the Life, to the end he might come as neer the same, as was possible: whereunto afterwards joyning Art, his Pictures surpassed the Life.

This Leonard (as some of his Friends, who lived in his time have given out) being desirous to make a Peece wherein he would express certain Clowns laughing (although he never perfected it more, then in the First draught) he made choice of some Clownes for his purpose, into whose acquaintance after he had insinuated himself, he invited them to a feast, amongst other of his Friends, and in the dinner, while he entred into a pleasant vain, uttering such variety of merry conceits, that they fell into an exceeding laughter (though they know not the reason thereof, Leonard diligently observed all their Gestures, together with those ridiculous

*lous speeches* which wrought this impression in their *Minds*, and after they were departed, withdrew himself into his Chamber. And there portraited them so lively, that they moved no less mirth in the beholders, then his jests did in them at the banquet.

They add moreover that he took special delight, to behold the *Gestures* of the condemned, as they were led to *Execution*, to the end, that he might mark the contracting of their *browes*, the motions of their *Eyes*, and their whole *Body*. In imitation whereof, I hold it expedient for a *Painter*, to delight in seeing those which fight at cuffs, to observe the *Eyes* of privy murderers, the courage of *wrestlers*, the actions of *Stage-players*, and the enticing allurements of *curtesans*, to the end he be not to seek many particulars, wherein the very *Life* and *Soul* of painting consisteth, wherefore I could wish all *Men* carefully to keep their *Brains* waking, which whosoever shall omit his invention (out of doubt) will sleep, studying perhaps *Ten Years* about the action of one *Figure*, which in the end will prove nothing worth, whence all famous inventors, for the avoiding of such gross defects, have the rather shewed themselves subtle Searchers out of the effects of nature, being moved thereunto by a special delight of often seeing, and continually practizing that which they have preconceived, so that who so keepeth this Order, shall unawares attain to such an habit of practice, in lively expressing all Actions and Gestures, best fitting his purpose, that it will become an other nature.

And whosoever shall diligently consider *Cæsar Seftius* his admirable works, wherein all the actions are most naturally appropriated to the Subject, will easily conclude that he trod in *Leonards* steps, and for this cause was he highly esteemed of *Raphael Urbine*, unto whom they say he was wont jestingly to say often, that it seemed a very strange thing unto him, that they two being such near Friends, in the Art of *Painting*, yet spared not

each other when they offended, a *speech* surely well befeeming *honest men*, albeit they lived together in such *sweet emulation*, which *humour* if it were to be found in these our *Dayes*, the World might be reputed *right happy*, but now *malicious envy* (to our great *disadvantage*) taketh place instead thereof, *Ministring Matter* to *ignorant* and *absurd people*, *insolently* to *disgrace* and *carp* at other Mens rare *perfections*.

*Of the Necessity of Motion.*

THE order of the *place* requireth, that I should consequently speak of *Motion* it self, namely with what *Art* the *Painter* ought to give *Motions* best fitting his *Pictures*, which is nothing else but a correspondency to the *nature* of the *proportion* of the *forme* and *matter* thereof, and herein consisteth the whole *spirit*, and *life* of the *Art*, which the *Painters* call sometimes the *fury*, sometimes the *grace*, and sometimes the *excellency* of the *Art*, for hereby they express an evident *distinction* between the *living* and the *dead*, the *fierce* and the *gentle*, the *ignorant* and the *learned*, the *sad* and the *merry*, and (in a Word) discover all the several *passions*, and *Gestures* which Mans Body is able to perform, which here we term by the name of *Motions*, for the more *significant* expressing of the *Mind* by an *outward* and *bodily demonstration*, so that by this means *inward motions* and *affections* may be as well, (or rather better) *signified* as by their *speech*, which is wrought by the *proper operations* of the Body, performing just as much as is delivered unto it from the *reasonable Soul*, stirred up either unto *good* or *bad*, according to their *private apprehensions*.

Which things, while all good *Painters* propose to themselves, in their *works*, they express such *admirable secrets* of *Nature*, as we see, which being moved  
by



by that *stirring vertue*, which continually lying hid in the *hart*, is outwardly shewed forth in the Body, by extending her *branches* through the *exteriour Members*, in such sort, that they may also receive motion, hence spring those *admirable motions* in *Pictures*, which appear as *diverse* as the *passions* whence they have their *original*, are different, of which point somewhat shall be said in this ensuing *Treatise*.

Now the *perfect knowledge* of this *motion*, is (as hath been shewed) accounted the most difficult part of the *art*, and reputed as a *divine gift*. Insomuch, as herein alone consisteth the comparison between *Painting* and *Poetry*, for as it is required in a *Poet*, that besides the *excellency* of his *wit*, he should moreover be furnished with a certain *propension* and *inclination* of *will*, inciting and moving him to *versify*, (which the antient called the *fury* of *Apollo* and the *Muses*) so likewise a *Painter* ought, together with those *natural parts* which are required at his hands, to be furnished with a *natural dexterity* and *inborn slight* of expressing the *principal motions*, even from his *cradle*; otherwise it is a very hard (if not impossible) matter, to obtain to the absolute *perfection* of this *Art*.

The *truth* whereof, *experience* it self may teach us: Insomuch as there both have been, and are many excellent *Painters*, who for their extraordinary *skill* in the *art*, are most highly esteemed of all Men, as being able to make sweet coloured pictures, having their *loyns* and *joynts* in all points answerable to the *rules* of *proportion*, understanding *Anatomy* and painfully lightened and shadowed, but because notwithstanding all their *care* and *industry* in this behalf, they could never be so happy, as to attain unto this *faculty*. They have left their *works* to the *view*, and *hard censure* of *posterity*, only because they expressed *unsuitable* and *lame Gestures*;

in their *Pictures*, which they had *stolen* out of other *Mens inventions* : namely, out of theirs who were *naturally indued* with that *grace*, and perswading themselves that these would very well serve their turns : they *imagined* such *Actions* and *Gestures* in their own *Pictures*, as being used besides the *purpose*, for which they were *First invented*, could not be *approved* for good, because they *offended* in *divers circumstances*, wherefore those *unfortunate painful Men* (who notwithstanding in some other *parts* of the *art*, be sufficiently *skilful*) although they can *imitate* the *Actions* and *Gestures* of other *inventors*, yet shall they never be able to make a *commendable History*, because they be *naturally disfurnished* of that *inborn facility* and *inclination*.

Now on the contrary *part*, I deny not, but those who are furnished with *natural invention*, may want that *patience* in their *work*, which the others have, which *propriety* ariseth from the multitude of their continual *inventions*, and stirring *apprehensions* : Inso-much, that before they can *thoroughly finish* or *compleat* any one *Body* or *Action*, infinite others arise in their *fantasie*, so that by reason of the great *delight* they feel in their *invention*, they cannot have the *patience* to finish any thing they take in hand.

But the most *absolute* and *compleat Painters* ( who are not so much inclined by *nature*, as perfected by *art*) endeavour to choose out the best *Actions* for every *purpose*, in restraining the *luxurious fury* of *nature*, by that *deliberate* *discretion* which they have in their *Idea*, by the *benefit* whereof, they *finish* their *Pictures* with *delight* and *contentment*, alwayes *expressing* in each *member*, a certain hidden *resemblance* of the *princial motions*, wherefore these alone carry away the *commendation* of the *profession* which is not granted to those *furious mad-caps*, by reason of their *impatency*, nor yet unto the former  
over

over diligent plodders, because they have not the *natural knowledge* of these *motions*, and therefore cannot express them in their works, as those *natural inventors* will do, with *Three* or *Four strokes*, wherefore they become *inferiour*: so that as well the one as the other, must needs give place to the *inventor*, who wisely joyneth the *industry* of art, with the *gift* of nature.

Notwithstanding, I am of *Opinion*, that it is possible to attain unto this so excellent a *faculty*, (though perhaps not with that *special eminency* of *natural facility*,) as by *industrious study* in the *knowledge* of these *motions*, and the *causes* whence they proceed. For from hence a Man may easily attain to a *certain understanding*, which afterwards putting in *practice* with *patience*, together with the other points, he may undoubtedly prove a *judicious inventor*, who never had any extraordinary *natural inclination*, my meaning is, that such an *inventor*, as guideth himself by *understanding*, shall attain to better *perfection* then the other, who is *naturally* indued with the *dexterity*, without *industry* and *patience*: for example, if a Man shall diligently peruse the whole *History* of *Christ*, out of doubt he shall gather the *true Idea* and *Method*, how he ought to represent the *motions* of *Christ*, the *Apostles*, the *Jews*, and all the rest, who had any part in that *cruel Tragedy*, so sufficiently, that the *Mind* of the beholder shall be no less moved to *pitty*, *tears* and *sorrow*, at the sight of the *picture*, then Men are usually at the reading of the *History*, so that by this means he shall shew in *Judas*, violent, offensive, brutish, buisie, and distempered motions, and in *Christ* being full of *patience*, remiss, and gentle, representing in him, as in a *glass* that singular *humility* and *patience*, wherewith he reconciled us unto his *Father*: All which, notwithstanding they may be sufficiently drawn out of the reading of the *History*, yet for more ease



sake, they may be taken from the *accidental examples* in the living, imitated with great felicity, and afterwards industriously and artificially expressed, by causing the abundance of his diligence to appear, in stirring up affections of piety and sorrow ( as in a peece of the passion ) or other affections, as the *History* he hath in hand, shall require.

Now concerning the way and manner how these Actions are to be given, according to the diversity of Passions and Affections, which at sundry times, upon several occasions may move Mens Minds; I hope in this Treatise to shew evident examples, although they be somewhat hard and drawn from the secrets of natural Philosophy, a thing which might seem to require a Man of riper Years, then so young a Man as my self, wherefore I must crave pardon for breaking the bounds of Modesty, in undertaking the handling thereof, had I not been prompted unto it by the Painters, ( it being of so great use and importance ) howbeit, If neither in that which hath been already spoken, I have sufficiently laied open this point, nor hereafter shall be able to deliver the Method fully, which I promised, yet notwithstanding this my pains is not to be contemned, insomuch as it will, ( at the least ) prepare an easie, free and Methodical passage for every Man to exercise his Wit, which must needs prove a most sure and ready way; insomuch as all the most Famous Painters have been directed thereby, who when they went about to counterfeit any story, First conceived the general forme thereof, and then gave to each Figure his peculiar Actions, proportioning, disposing, and guiding them by discretion, accompanied with natural felicity.

Now amongst the worthy Painters who excelled herein, Raphael Urbine, was not the least, who performed his Works, with a Divine kind of Majesty, neither was Polidore much behind him in his kind, whose Pictures seemed as it were passing furious, nor yet Andreas

Monta-

*Montagnea* whose vain shewed a very laborious curiosity: Nor yet *Leonard del Vincent*, in whose *doings* there was never any error found in this point: Whereof amongst all other of his works, that admirable last supper of *Christ in Refect. St. Marie de gratia in Milane*, maketh most evident proof, in which he hath so lively expressed the passions of the *Apostles* minds in their countenances, and the rest of their Body, that a Man may boldly say, the truth was nothing superiour to his representation, and need not be afraid to reckon it amongst the best works of Oyl-painting, (of which kind of painting *John Van Eyck* of *Maesjck* born in the Year 1366. was the first Inventor) for in those *Apostles*, you might distinctly perceive admiration, fear, grief, suspicion, love &c. all which were sometimes to be seen together in one of them, and Finally in *Judas* a Treason-plotting countenance, as it were the very true counterfeite of a Traitor, so that therein he hath left a sufficient argument of his rare perfection, in the true understanding of the passions of the Mind, exemplified outwardly in the Body, which because it is the most necessary part of painting, I propose (as I say) to handle in this present Treatise.

I may not omit *Michael Angelo* in any case, whose skill and painfulness in this point was so great, that his Pictures carry with them more hard motions, expressed after an unusual manner, but all of them tending to a certain stout boldness. And as for *Titian* he hath worthily purchased the name of a greater Painter in this matter, as his Pictures do sufficiently witness; in each whereof, there shineth a certain moving vertue, seeming to incite the beholder, unto the imitation thereof, of whom this saying may be well verified, that he was beloved of the World, and envied of nature.

Finally, *Gaudentius* (though he be not much known) was inferiour unto few, in giving the apt motions to the

*Saints & Angels*, who was not only a very witty painter, as I have elsewhere shewed, but also a most profound *Philosopher* and *Mathematician*, amongst all whose all praise worthy works, ( which are almost infinite, especially in this point of motion ) there divers *Mysteries of Christs passions*, of his doings, but chiefly a crucifix, called *Mount Calvary* at the *Sepulchre of Varasto*, where he hath made admirable *Horses* and *strange Angels*, not only in painting but also in *plaislick*, of a kind of earib, wrought most curiously with his own hand, *di tutto relievo*, through all the *Figures*.

Besides in the *Vault* of the *Chappel* of *St. Mary de gratia* in *Milane*, he hath wrought most natural *Angels*, I mean especially for their actions, there is also that mighty *Cube* of *St. Mary de Sorono* full of thrones of *Angels*, set out with *habits* and actions of all sorts, carrying diversity of most strange *Instruments* in their hands, I may not conceal that goodly *Chappel*, which he made in his latter time, in the *Church* of peace in *Milane*, where you shall find small *Histories* of our *Lady* and *Joachim*, shewing such *superexcellent motions*, that they seem much to revive and animate the *spectators*.

Moreover the story of *St. Roccho*, done by him in *Vercelli*, with divers other works in that *City*; although indeed all *Lombardy* be adorned with his most rare works, whose common saying concerning this *Art* of motions, I will not conceal; which was, that all *painters* delight to steal other Mens inventions, but that he himself was in no great danger of being detected hereafter. Now this great painter, although in reason, he might for his discretion, wisdom, and worth be compared with the above named in the *First Treatise*: Yet notwithstanding is he omitted by *George Vasary*, in his *lives* of the *Famous Painters, Carvers, and Architects*, an argument (to say no worse of him that he intended to eternize only his



his own *Tuscanes*, but I proceed to the *unfolding* of the *original causes* of these *motions*: And First for our *better understanding*, I will begin with those *passions* of the *mind*, whereby the *Body* is moved, to the performance of his *particular effects*.

*Of the passions of the Mind, their original and difference.*

THE *passions* of the *mind*, are nothing else but certain *motions*, proceeding from the apprehension of some thing, now this apprehension is *Threefold*, *sensitive*, *rational*, and *intellectual*, and from these *Three*, there arise *Three passions* in the *mind*, for sometimes we follow *sensitive apprehensions*, and then we consider *good* and *evil*, under the shew of that which is *profitable* or *unprofitable*, *pleasant* or *offensive*; and these are called *natural affections*, sometimes we pursue *rational apprehensions*, considering *good* and *evil* in manner of *virtue* or *vice*, *praise* or *dispraise*; *honesty* or *dishonesty*; and these are *reasonable affections*, sometimes we imbrace *apprehensions intellectual*; regarding *good* and *evil*, as *true* and *false*, and these are *intellectual apprehensions*.

Now the *inferiour powers* of the *mind* are of two sorts, either *desire* or *anger*, and both of these respect that which seemeth *good* or *bad*, diversly, for the *desiring part* either considereth *good* and *bad absolutely*; and so it causeth *love* and *liking*, and contrarywise *hatred*, or else it respects *good* as *absent*, whence ariseth *desire* or *longing*, or else *evil* as *absent*, but at hand, and so it breedeth *fear*, *dread*, &c. or both of them as *present*, and so from the First cometh *joy* and *delight*, from the latter *heaviness* and *grief*, the *angry faculty* considereth *good* and *evil*, as it is *easy* or *hard* to be attained unto, or avoided; whence springeth sometimes *confidence* and *hope*, sometimes *audacity*, sometimes *distrust*, and so *desperation*, &c. some-

times it is moved to *revenge*, and that is in regard of *evil* past, as *injury* or *offence* received, and so it breedeth *anger*, by that which hath hitherto been spoken it is evident, that there are *Eleven* passions or affections in the mind, which are these, *love*, *hatred*, *desire*, *fear*, *joy*, *sorrow*, *hope*, *dispair*, *audacity*, *timorousness* and *anger*, from which there do consequently arise so many sorts of actions in the art, as there may be affections expressed in Mens Bodies, wherefore we ought carefully to observe the motions which are outwardly expressed, in such sort, as they do manifestly point to the roots, whence they spring, and discover the causes from which they proceed, distributing them and disposing them accordingly in the Bodies, or Physiognomies which whosoever shall fail in, shall (questionless) wholly pervert the Order of things, confounding the Beauty of Histories, whether they be Fables, or other Inventions, which are to be painted.

*How the Body or Physiognomy is altered by the Passions of the mind.*

IT is a clear case, that the mind according to the divers affections (whereof I spake before) by reason of the apprehensions both sensible and imaginative) doth diversly change and alter the Body with sensible alterations, by varying the accidents thereof, and producing sundry qualities in the members, so that in mirth, the spirits are enlarged, in fear they are contracted, in bashfulness they fly up to the Brain, again, in joy the heart is extended by degrees, in displeasure it is drawn in by little and little, as likewise in anger and fear, but sudden anger and desire of revenge procureth heat, blushing, bitter tast, and the flux of the Belly, fear brings coldness, the panting of the heart, the failing of the voice, and paleness, heaviness causeth sweating, and a blemyish paleness, mercifulness breeds a certain heaviness, which oftentimes hurteth him that is moved

to mercy, which appeares ordinarily in *lovers*, in whom there is such a *Sympathy*, that whatsoever one *indureth*, the other likewise *suffereth* the same; *Anxiety* causeth dryness and *blackness*; *desire* and *love*, breeds sundry colours, sometimes *red*, sometimes *pale*, as we daily see in *lovers*, especially in their meetings.

Now all these *passions* when they be exceeding *vehement* do sometimes bring *Death*, which happened to *Sophocles* and *Dionysius* the *Sicilian Tyrant*, when he received the *News* of a *desperate victory*; the like hath befallen *divers others* through *heaviness* and sundry other *mishaps* have proceeded from the like *passions*; when they assaulted *Mens minds*, whereof we have *divers examples* in *stories*, which I mean not to stand upon as being a thing more *curious* then *necessary* to our purpose; only I will shew, of what *power* and *efficacy*, *fierce wrath* joyned with a *magnanimous audacity* can do, by the example of *Alexander the Great*, who being over-matched by his *Enemies* in *India*, was seen to *reak* forth from his *Body*, *fire* and *light*, the like whereof we read of the *Father of Theodoricus*, who by the like *vehement effect*, breathed out of his heart, as from a *burning furnace*, *fiery sparkles*, which flying forth *shon* and made a *sound* in the *Air*. Thus therefore we represent all these *passions* in a story, together with their convenient and proper *Motions*, we set forth that great variety which worketh such *delight* and *pleasure*, that it allureth our *Minds* unto it, with a *sweet kind* of *compulsion*, no otherwise then most *delectable Musick* enchaunteth the *Eares* of the *Hearers*, which (as they write) is so forcible that way, that a certain *Musitian* boasted, that by the *power* of his notes, he caused *Men* to grow *furious*, and afterwards come to themselves again.



*Of the Motions procured by the Seven planets.*

**A**mongst the Seven Governours of the *World* (which *Merc: Trismegistus* calleth *Planets*, as *Saturn*, *Jupiter*, *Mars*, *Sol*, *Venus*, *Mercury* and *Luna*) the chief and principal is *Saturn*, which hath also received divers names of antiquity, as *Heaven*, *Sith-bearer*, the father of the gods, *Patrone* of time, and from his effects here below: wise, intelligent, ingenious, the seed of great profundity, the *Auctor* of secret contemplation, the imprinter of weighty thoughts in *Men*, a destroyer and preserver, the *Subjector* of power and might, the keeper of hidden things, and the *Auctor* of finding and loosing.

His influences are partly good, and partly bad, according to the disposition of him that receiveth them, as weeping, melancholly &c. he causeth religious actions, as to bow the knee, look down upon the earth, pray, and such like motions of the *Breast* and *Face*, common to those which pray, or other austere and satyrical Fellows, with *Head* declining, *Eyes* fixed on the earth, wasting himself with a furious silence, and examining his own speech, with hanging lips. Moreover, he causeth a complexion of colour between black and yellow, meager, distorted, of an hard skin, eminent veyns, an hairy Body, small *Eyes*, *Eye-brows* joyned together, a thin beard, thick lips, with looks cast down, an heavy gate, enterfairing as he goeth, besides he makes a *Man* subtil, witty, a way-layer, and murtherer: Now according to this forme of Body, and these motions, you may frame any Body subject unto *Saturn*, that is of the temper and complexion answerable to the nature of *Saturn*, so that by that which hath been said concerning this Planet in particular, as also by that which shall be spoken severally of the rest,

rest, we may gather one general Rule, as touching the *Art of motions* in our *Pictures*, as well in respect of the *quality* of the *humour*, as of the *motions* themselves, &c.

*Jupiter.*

The Second Planet is *Jupiter*, so named of the *Latines*, as you would say *Jovans Pater*, the Father of *beneficence* and *liberality*; he is otherwise called of the *Poets*, *magnanimous*, the *thunderer* and *lightner*, *invincible*, *altipotent*, *magnipotent*, *good natur'd*, *fortunate*, *sweet*, *pleasant*, the best *well-willer*, *honest*, *neat*, of a good *gate*, *honourable*, the *author* of *mirth* and *judgement*, *wise*, *true*, the *revealer* of *truth*, the *chief judge* exceeding all the *Planets* in *goodness*, the *bestower* of *riches* and *wisdome*: the *dispositions* and *affections* proceeding from this Planet are, a *merry* and *ingenious countenance*, *actions* of *honour*, *shaking* of *hands*, after the manner of those which *entertain strangers*, *commending* and *speaking Men fair*, with *cap* and *knee*, *lifting up the head* as those use which *pray*.

Concerning the *complexion*, *disposition* and *feature* of the *Body*, he makes a *Man* of a *mixt sanguine*, betwixt *white* and *red*, of a *delicate Body*, *good stature*, either *bald* or else *high-foreheaded*, *Eyes* somewhat *big*, *short nostrils* and *unequal*, the *cheek-teeth* somewhat *big*, a *curled beard*, *deceitful* and *fair* conditioned: All which correspondencies betwixt the *qualities* of the *mind*, and the *constitution* of the *Body*, together with their *exteriour affections*, if the *Painter* shall with *judgement* consider and observe, they will breed both *delight* in him, and *estimation* to his *Art*, teaching him farthermore the *true difference* between an *honest man* and a *varlet*, one that is *merry*, and a *melancholly Fellow*, a *Man* of his *hands*, and a *coward*, and so forth, according to all those *qualities* naturally proceeding from *Jupiter*, &c.

*Mars.*

The third Planet is *Mars*, and by the Poets is also called *Mavors*, the god of warr, bloody, armipotent, ensifer, magnanimous, bold, unconquerable, full of generosity, of invincible power, of impetuous presence, unresistable, a subverter of the strong and mighty, and a deposer of Kings: he is the Lord of heat, burning and power, the Planet of blood, brawls and violence, incensing, contentions and bold spirits, and (in a word) broching all disordered, inconsiderate and heady actions: his Gestures are terrible, cruel, fierce, angry, proud, hasty and violent: he causeth Men to be of a red complexion, a deep yellow hair, round visaged, fiery Eyes, a cruel and fierce countenance, by reason of his intemperate heat; inso-much that he is reputed hot and dry, in the highest degree, bearing sway over red choller.

*Sol.*

The Fourth Planet is *Sol*, which hath divers other appellations as *Phæbus*, *Apollo*, *Titan*, *Pean*, *Horus*, *Osiris*, *Arcitenent*, *Fiery*, *Golden flamiger*, *Radiant*, *Igni-comus*, the Eye of the World, *Lucifer*, *Multifidus*, *Omnipotent*, the Prince of Starrs, the grand Seignior, he is of good Nature, fortunate, honest, neat, prudent, intelligent, wise, the governour, the bestower of life upon all Bodies indued with Soul, obscuring the light of the other Starrs with his exceeding brightness, and yet imparting unto them all that light they have, whence in respect of the night he is called *Dyonisus*, and of the day *Apollo*, as you would say *pellens malum*, the dispeller of evil, wherefore the Athenians called him *ἀλεξίμαχον*, &c.

He was named *Phæbus* by reason of his Beauty, and *Vulcan* because of the violent heat he ingendereth in those Bodies, over which he hath dominion, and *Sol* for the prebeminence of his light; wherefore the Assyrians named him *Adad*, which signifyeth alone, the Hebrews *Shemesh*; the Motions proceeding from him are courageous,



gious, honourable, majesticall, considerate and wise; the colour and hew which he giveth is brownish, betwixt yellow and black mixed with red, causing those which are subject to him to be of a low stature, yet of a comely personage, bald, curled, with yellowish Eyes, touching the affections of their mind, they are considerate, prudent, trusty, vain glorious, and magnanimous.

### Venus.

The Fifth Planet is *Venus*, whose denominations are likewise divers, expressed by variety of *Epithites*; as chief, mild, fair, bright, white, pleasant, powerful, fruitful, the Mother of love and beauty, the progeny of ages, the First Mother of Man, she that First joyned both Sexes together in love, the Queen of all joy, friendly, merciful, ever bountiful to Mankind, embracing all things with her vertue, humbling the strong and lofty, and exalting the base and weak, and directing all things; they call her *Aphrodite*, because she is said to be born of the froth of the Sea, and *Phosphorus*, or *Lucifer*, when she appeareth before the Sun in the East, and *Hesperus* when she followeth the Sun, her motions are pleasant and mirthful, being given to sports, dalliance, dancing, and embracings, she makes the countenance amiable, pleasant, and merry, working a kind of whiteness in the Body, by reason of her cold and moist nature (resembling the water which when it is congealed and frozen, looketh white) yet prettily mixed with red; she causeth Men to be proper of Body, fair and round visaged, with black rowling Eyes, brown hair, of a lovely disposition, gentle, bountiful, courteous, affable and gracious.

### Mercury.

*Mercury* is the sixth Planet, and of the antient is called the Sonne of *Jupiter*, the *Herauld* and *prolocutor* of the gods, the *Gracians* call him *σελαδός*, which signifyeth shining, serpentiger, caducifer, light-foot, eloquent, gainful, wise,

reasonable, strong, potent as well on the good as on the bad part, the notary of the Sun, Jupiters herauld, having commerce with the supernal and infernal gods, male with the male, and female with the female, most fruitful, an Hermaphrodite: Lucian calleth him the Umpire of the gods, others Hermes, or the interpreter, and the expounder of the mysteries of nature; his motions are inconstant, slippery, mutable, strong, lively, prompt and ready, he causeth a complexion neither very white, nor very black, a long visage, an high forehead, small Eyes, not altogether black, an even Nose and something long, thin beard, long and slender fingers: the operations which he causeth in the minde are witty, subtil, busy, sharp, wary, and fruitful.

*Luna.*

The Seventh and last Planet is *Luna*, of the antients called *Phæbe*, *Diana*, *Lucina*, *Proserpina*, *Hecate*, *Menstrena*, *Triformis*, *Nocti Luca*, wandring, silent, double horned, safe, night walking, cornigera, Queen of Heaven, the first of the goddesses, Queen over mens minds, Mistress of all the Elements, she to home the stars have relation, and the Elements are in subjection, at whose beck the lightnings shine, and seeds spring, the Mother of corn, Sister of *Phæbus*, the transporter of light, from one planet to another; imparting her light, to all the other starrs, and restraining their divers courses; the Lady of raine and moisture, the bestower of riches, the Nurse of mankinde, the ruler of all states, pittiful, merciful, the preserver of men both by Sea and Land, mittigating the tempests at Sea, the subduer of carnal affections, Queen of the world, and vanquisher of Hell, whose Majesty the birds of the aire, the beasts of the fields, the serpentes in the rocks, and caves of the earth, and the fishes of the sea doe reverence; finally the Enemy to Thieves and Murtherers.

Her motions are moveable, beneficent, childish, simple, oblivious,

*livious*, and *curious*; she makes a man of a *pale complexion*, intermingled with *red* of a comely *stature*, round *visaged* and marked *blackish eyes*, *beetle browes*, *tender and soft flesh*, the *Qualities* of whole minds are *satiability*, *facility*, *pensiveness*, *affection of news*, no ready gift in *discourfing*.

And from hence springeth the whole variety of all the other *motions* besides the above named of the *Elements*, all which serve for *tokens*, and *signes* whereby we may the better attain to the *knowledge* of the *natures* of people, and their *affections* and *passions*, answerable to the *vertue* and *influence* of the *Planets*, which the *antient Mathematicians* have by long experience observed, neither did those excellent *Motistes* *Al. Magnus*, *Abbas Tritemius*, and *Rai : Lullius* consider them to any other *end* and *purpose*. Whosoever therefore, shall be thoroughly possessed with these things, imprinting them well in his *mind*, and proceeding according to their direction in his *Pictures*, may assure himself that his *works* will prove not only *commendable*, but even exceeding *admirable*, expressing in them *sadness* by *Saturn*, by *Jupiter contentment*, by *Mars cruelty*, by *Sol magnanimity*, by *Mercury quickness of spirit*, by *Venus love and wantonness*, and by *Luna humanity and gentleness*; exemplifying moreover according to these *Observations*, these and such like *effects*, united together in the *compounds*; all which the *Antient Masters*, carefully observed, (as may appear by their *works*) which sufficiently declare, that they both understood these *mysteries*, and took great *pains* in expressing them, whence it is most *apparent*, that the *knowledge* of these things, cannot be attained unto, by the mere *practice* of *Painting*, but by the earnest *study* of *philosophy*, wherewith the *Antient Painters* were sufficiently furnished; and hence it is, that *Michael Angelo*



of late Years, being very skilful in these matters, gave to the *Devils* in his last judgement in the *Vaticane*, not only the *actions* and *gestures* of *Angels* and nimble and *active* Men, together with other earthly ornaments, but also divers other *looks* and *countenances*, most suitable to their wicked *intents*, as in his own discretion he thought fittest; whence we find *Charon* and the other *Devils*, to have several *countenances*, though all of them *dreadful* and *malicious*, in which point *Leonard Vincent* was much renowned, and the other Five mentioned in the Second Chapter of this *Treatise*, who were the very *light* and *direction* of all the other good *Painters*, whom I therefore pass over, because they are recorded in the *lives* of the *Painters*, who were reputed little inferiour to *Michael Angelo*.

*How all the motions may accidentally befall any man though diversly.*

HAVING hitherto discoursed of the *motions* arising from the *Elements*, the *humours* and the *Cæstial bodies*, as also how they differ each from other, according to their several *operations* in men, and their *various effects*; it remaineth that I should now speak in particular of certaine *principal properties* of these *motions*, taking *natural examples*, (as my manner is) and applying them to the *Planets*, from whence this variety of *effects* and *influences* descends, which particularity of *motions* if it shall be expressed, it will discover all sorts of *passions* of the *mind* in each *Body* or *Physognomy*, but because each man is *subject* to some one of the *Planets*, and therefore is more especially inclined to some one *affection*, it will not be amiss to shew how upon occasion any *affection* whatsoever may be stirred up in a Man of any *condition*, or *constitution*; the *manifestation* whereof, riseth wholly from the *Five Senses*, as the *instruments* whereby the

the objects be apprehended: as by the Eye we see that which is comely and undecent; by the Ear we hear sounds pleasant and unpleasant, as praise and dispraise; by the Nostrils we smell sweet and stinking, strong and sharp savours, by the taste we discern sweet, sharp, unsavoury, thick, salt, stiptick, virulent, bitter, fat, strong, unpleasant, and (as Aristotle saith) hard and soft: Finally by the feeling, we touch cold and hot, moist and dry, as also sharp, light, slippery, heavy, hard, soft, gross, slender and such like qualities, from whence all actions, whereunto any kind of Body is subject, are caused, though more abundantly, and more apparently in some, then in others, whence we are given to understand, that as these qualities are distinct between themselves, and are severally applyed to the Planets, so likewise the affections proceeding from them do vary, accordingly as the senses, apprehensions and passions, together with their objects, viz. colours, sounds, smells, tastes and matters do differ.

Now although there be but one particular instinct in each private Man, which inclineth him to good or evil, whereunto that Free Governour and Arbitrator of his affections most naturally learneth, and from whence all his ordinary actions proceed, notwithstanding there is no impediment why a Man may not be affected diversely, by any of the exteriour senses (the ordinary instruments of all our operations) by framing in his mind, passions answerable to the object apprehended by his senses, and so cause such like Actions to break forth in him, as be repugnant to his particular instinct, the truth whereof we read in David King of the Hebrews; who was lasciviously affected, when from the top of his Pallace, he beheld Bathsheba, bathing her self naked; and at the same instant was stirred up unto cruelty in commanding Urias to be slain, although he were natu-

rally both a most *continent* and *clement Prince*. Again his *Sonne Solomon the Wise*, was subdued by his *sense*, and bewitched by the *inticings* of *Concubines* and *Idolaters*, things much abhorrent from the *Instinct* of his *nature*: And thus in perusing of *Histories*, we shall find how divers most *valiant Princes*, have upon occasions proved *faint hearted*, and been stained with *covetousness*, many *pittyful Men* been given to *cruelty*, religious *Men* to *revenge* and *malice*, chaste *Mento* *luxury*, stout *Men* to *cowardice*, &c. observing moreover the alteration of *mirth* into *sorrow*, *lamentation* into *laughter*, *covetousness* into *liberality*; which I therefore omit, because we daily see lively *examples* of people successively affected with sundry *vices*, as *rapines*, *grief*, *love*, *dishonesty*, *theft*, *murder*, *hatred*, *revenge*, *trechery*, *tyrany*, *insolency*, &c. and contrary-wise with *religion*, *mercy*, *loyalty*, *clemency*, *liberality*, *honesty*, *victorious*, *desire* of *honour*, &c. as *Thieves* being ashamed to lay themselves open before company, for *fear* of being discovered, will make a *fair shew* of true *Men*; and *curtesans* and *light House-wives*, in the presence of other grave *Matrons*, will bare the countenance of very *honest women*, concealing their *habitual naughtyness*, for *Fear* of the *disgrace* and *punishment*, which would otherwise ensue; and *fellones* to avoid the *danger* of the *halter*, will take upon them the *habit* of *honest* and *civil Men*.

Hence then the *Painter* may learn how to express not only the *proper* and *natural motions*, but also the *accidental*, wherein consisteth no small part of the *difficulty* of the *Art*, namely in representing *diversities* of *affections* and *passions* in one *Body* or *Face*: a thing much practized, by the *antient Painters* (though with great *difficulty*) who ever endeavoured to leave no part of the *Life* unexpressed. It is recorded that *Euphranor* gave such a touch to the counterfeit of *Paris*, that therein



therein the beholder might at once collect, that he was *Umpire* of the Three goddesses, the *courter* of *Helena*, and the *slayer* of *Achilles*, and of *Parafus* the *Ephesian*, that he painted the *Idol* of the *Athenians* in such sort, that he seemed *angry*, *unjust*, *inconstant*, *implacable*, *gentle*, *merciful*, &c. again we read how *Theon* represented in *Orestes*, *fury* and *grief* mixed together; and of another who resembled in *Ulysses* a dissembling *patience*: as also of *Aristides* the *Thebane*, who (in the Person of a wounded *Woman* giving her child suck) expressed *pain*, and *fear* so lively, that it is hard to say whether she were more *pained* with the *sense* of her *wound*, then *afraid*, least her child lacking *milk*, should suck *bloud*; who also is reported to have been the First that began to represent these *perturbations* of the *Mind*, and was afterward followed of the other *Painters*, as a guide herein, as it was once by chance found upon a small earthen head of *Christ* in his *Child-hood*, made by *Leonard Vincent* himself; wherein you might evidently perceive, the *simplicity* and *innocency* of a *Child*, accompanied with *understanding*, *wisdom*, and *Majesty*: and although it were the *countenance* of but a *young* and *tender* *Child*, yet it seemed to shew forth a kind of *sage antiquity*, much to be admired.

*Of divers other necessary Motions.*

BESIDES the *Motions* already declared at large, for the better understanding of such other as might hereafter serve for our *purpose*, it is to be observed, that there are certain others of no small *importance*, which are to be referred unto that which is most comely, and agreeable to *Mans Body*, as well in respect of such *effects* as proceed from the same; as also in regard of the *times* and *seasons*, together with

the consideration of the *objects*, offering themselves to our *sense*, for the better attaining whereof, we must in all the *Actions* and *Gestures*; make choice of the *chiefeſt* and *moſt principal*, ſearching them out moſt *diligently*, and deducing them from the *circumſtances*, which are found in the part to be represented, as *Leonard Vincent* did in the *Cartone* of *St. Anne*, which was afterwards transported into *France*, and is now to be ſeen in *Milane*, with *Aurelius Lovinus* a *Painter*, in the border whereof, there are many draughts, expreſſing the great joy and mirth which the *Virgin Mary* conceived, when ſhe beheld ſo goodly a *Child* as *Chriſt* born, conſidering with herſelf that ſhe was made worthy to be his *Mother*: and likewise in *St. Anne*, the joy and contentment which ſhe felt, ſeeing her daughter become the *Bleſſed Mother* of *God*.

Moreover in that Piece which is to be ſeen in the *Chappel* of the conception in *St. Francis Church* at *Milane*, where you ſhall ſee how *St. John Baptiſt* kneeling with his *Hands* together, bowed towards *Chriſt*; which was an action of obedience, and *Child-like* reverence, and in the *Virgin*, a geſture of chearful contemplation, whileſt ſhe beheld theſe actions; and in the *Angel*, an action of *Angelical Beauty*, in conſideration of the joy which was to betide the world by this *mystery*; in *Chriſt* as yet a child divinity and wiſdome, where the *Virgin Mary* alſo kneeled by holding *St. John* in her *Right Hand*, and ſtretching forward her *Left Hand* which was foreshortened, and finally the *Angel* holding *Chriſt* in his *Left Hand*, who ſitting by, looked upon *St. John* and *Bleſſed* him; again, divers other *Famous Painters* and lights of the art, have obſerved other motions, as contemplation in caſting the *Eyes* up to *Heaven*, admiring the *Angelical Muſick*, and neglecting for a time all *Inferiour Muſick*, with the  
hands,

*hands, instruments, and other earthly melodics; which motions were expressed in that singular piece of St. Cecily which Raph. Painted with Four other Saints, which work is now to be found in Bologna at St. Johns in the mount, the Agony also and sorrow of the afflicted, which Anton. Correggio expressed most artificially in his own City, in Christ praying in the Garden; as likewise want, panting, sweating, sleeping, threatening, and the motion of the flaming fire: all which are most lively expressed by them in divers places, and now to come to the Poets, that which Ariosto speaketh of his Orlando, may serve for a fit example herein.*

*His leggs and hands he shakes, and breaths withall,  
Whiles from his Face the liquid drops do fall.*

And in another place, of a Man grievously diseased, famished, and out of heart, in the Person of the same Orlando, when Angelica found him lying upon the shore.

*Rough, grisly hair'd, Eyes staring, visage wan,  
Sun-burn'd and patcht, and all deform'd in sight,  
In fine he lookt to make a true description  
In face like Death, in brow, like an Egyptian.*

And that of Dant describing a Shipwrack in a great Tempest at Sea, where the Men are saved.

*And even as they, who panting at a wrack,  
Scap'd from the Sea, and gotten to the shore,  
Turn'd to the dangerous water, and look back:*

And thus much for examples, for he that would set down all the examples which would serve for the shewing, how in every effect we ought to choose the most proper motions, without which the Picture will be of small worth, should grow infinite; we must also have



regard to the *seasons*, for the *Summer* causeth open, and wearisome actions, subject unto sweatings and redness; the *Winter* restrained, drawn in, and trembling; the *Spring* merry, nimble, prompt, and of a good colour; the *Autumne* doubtful, and more inclining unto melancholly then otherwise, notwithstanding if you be to paint a labouring Man, you must vvithout any regard of the *season* (though more of *Summer* then any of the rest) represent him with raised limns and strong muscles, swelling and standing forth, sweating and burning, especially in such as carry burdens, draw great weights, or use vehement leaping, walking, jesting with weapons, fencing and such like exercises; lastly, *sleep* causeth no motions of vigor or force to be represented, but as if the body were vvithout life; Wherefore we must take heed, vve doe not (as some use) give unto those vvhich *sleep* such kinds of actions in their lying, as in probability will not suffer them to *sleep*, as vve see oft-times in Men lying athwart stones, benches, &c. being represented vvith their limns supported by their own force, vvherein it is evident, that such *Painters* know not how to observe a *Decorum*.

Farthermore, there are motions proceeding from the *Tast*, as daily experience teach us, for *sourness* and *bitterness* cause the bending of the *Eyelids*, and other parts; *sweet* and *savoury*, a *cheerful* countenance; the like of good *smells*, whereas contrarywise bad *smells* make us draw in the *Nostrils*, look aside, turn the back, with wrinkled *Eye-lids*, *Eyes* almost closed, and *mouth* drawn in; of *bearing* and *touching*, they also cause distinct motions in our Bodies, as for example, from *sharp* sounds and noise, riseth sudden fear and affrighting, from touching any hot thing, quick and speedy motions, from touching cold things, restrained and fearful motions, as in such in the *winter* touch *Ice* or *Snow*. And so I conclude of seeing, for in looking upon things exceeding bright,  
the

the *sight* is offended, and a Man withdraweth himself for safegard in beholding obscure things; the *Eyes* are *sharpened*, by drawing near, and as it were *clozing* them as *Painters* use to do, when they would look near on a thing, which effect is caused by a *Picture* set afar off: And here I will conclude, those simple Motions which are of most Importance, proceeding unto those which consist of multiplicity.

*Of the Motions of all sorts of Cloth.*

THE Motions of Cloth, that as the *Folds* or *Plaits* ought to runne out every way like *boughs* from the *Stemme* and *Body* of the *Tree*: and must be so made that one *Plait* rise from another, as one *bough*, or one *stream* of *Water* issueth out from another, in such wise, that there be no part of the *Cloth* wherein there appear not some of these motions; now these motions would be moderate, gentle and free, without any interruptions, more to be admired for their grace and facility, then for affected pains and industry; and because all sorts of *Cloth* have their motions, as well as *Bodies*, it must needs be that they differ between themselves, according to the differences of the clothes themselves.

Wherefore, they must be more light in fine Cloth, as *Sarcenet*, *Linnen*, *Cypres*, &c. in which the *Plaits* are small, raised up, trembling, and as it were sweetly waving, somewhat puffed up by extending and spreading themselves like a *Sail*, where the motion receiveth more strength by the wind, they do fall close upon the bare skin, as appeareth plainly in womens garments, in whom you shall see their Thin clothes stretched upon their bare skin, on that side where the wind bloweth, and blown upon the contrary part, the same falleth out in mantells, the loose ends of girdles and garters, all which motions do

most fitly belong unto the apparel of *nymphs* and other *goddeses*, in respect of their *lightness*; *gross* and *dul shadows* are found in *stiff cloths*, where the *Plaits* are *few* and *gross*, so that they are capable but of *slow motion*, and therefore they sink *downwards*, and can hardly fall close to the *bare skin*, by reason of their own *grosseness*, which sustaineth them, and these *motions* do chiefly appeare in *cloth of gold*, *felt*, *thick leather* &c: in which the *Air* can have little *force* or none, wherefore the *plaits* or *folds* have their *motion* accordingly as they are handled and pressed by the *wearer*; as under the *arme*, and under the *knee*, by *opening* and *stretching* out the *legg* and the *arme*, ever making *gross*, *hard*, and *stiff folds*, without all *slightings* or *plyableness*, in such sort, that if a *Man* may lay *Finer cloth* upon them, they will easily *bear it up* without *pressing down*.

*Temperate motions*, which are neither too *gross*, nor too *slight*, are such as appear in the *folds* of *stuff* and other *cloths* of *Fine wool*, which therefore may conveniently be moved of the *Air*, and are *plyable* to a *Mans limms*, and so making most *sweet* and *pleasant folds*, they follow the *bare* very well, becoming very *nimble*, and falling *plyably* about the *loyns*. And hence have *Raphael*, *Michael Angelo*, *Leonard*, *Gaudentius*, *Albertus Durerus*, and other *Famous Masters* in *Drapery*, taken the *method* and *way* of giving the *true motions* unto *garments*, as from the most *perfect pattern* for their general use in making the *mantells* of the *Saints*, *Pavilions* or *Tents*, which are made with this kind of *Drapery*, besides these, there are also other kinds of *motions* called *turnings* and *crossings*, which are proper unto *Damasks*, *Taffataes*, *Sattins*, *Cloth of gold* &c: in which appeare *folds crossing* and *breaking* each other, by the divers *Vertue* of the *Drapery*.

Whence the *Venetians* have taken their manner of  
Dra-



*Drapery*, who make their *folds* much different from the said *motions* of *Raphael* and the rest, which indeed ought not to be used any where save in counterfeits by the *life*, where it seems they are not onely tolerable, but also very requisite; but in my *Judgement* they should not ordinarily be used in *Histories*, and yet if occasion do require that they should be represented in any *place*, they ought not to be done wholly, but only somewhat and resembled with a pretty touch and *grace*, in such sort that they may not savour of an affected imitation of the *natural garments*, without *grace*, or *order* which is often used of many with small reason (as I think:) there are also other *motions* as of velvet, limber leather, &c. all which differ one from another, but I think these may suffice, without proceeding any farther in the discourse hereof; only let the *Painter* be careful and industrious, as well herein as in the rest: Inasmuch as in the excellency and perfection thereof dependeth, as well hereon, as on the rest; because these *motions* of *garments* come so neer the *life*, that it is evident, that they are able to make a picture seem displeasing and unfavoured, procuring the scorn and laughter of the beholders, such were some of those which were used by our Great Grandfathers Sonne Two hundred Years since, which seemed like round sticks, or candles hanging down, which some of our late workmen of good Note have also used, making their folds too long, hanging down like Canes, without any kind of *grace*. Another defect in the *Drapery* of old Pictures I find, which is; that they seem to be made like unto Scales in some sort: which I think, they took from the imitation of the models of Men, cloathed with paper; which point afterwards attained to high perfection, by the great industry of *Bramant*, and *Andreas*

*Montegnia*, and was afterwards reformed, and made much more absolute by *Albert Durer*, and *Lucas of Leiden*, and *Aldigravers*, whose Folds for the most part nere like *guts* confounded in one another.

*Of the Motions of Trees and all other things that are moved.*

LASTly the *Motions* of every thing which is moved, ought to be expressed with *Judgement*, accordingly as they agree with the thing whereunto they are given, sometimes *quick*, sometimes *slow*, sometimes *moveable*, sometimes not : And First of all in *Trees*, when they are *shaken* with the *wind*, there smaller (and therefore more plyable) *boughs*, must be resembled with such an *action*, that they may more strike one against another, by *yeilding* and *declining* from the part whence the *wind* bloweth, then the *stiffer* (and therefore *slower*) the Body notwithstanding *remaining strong* and *stedfast*, the *boughs* growing from thence, begin a little to *bend*, and the others which proceed from them a little more, so that in the *end* they shew the same *agility*, in the *leaves* most of all; it is true that all *Trees* have not a like *motion* : For the *Willow* moveth, and is *shaken* extremely, the *Pine-tree* not at all, or very little, and so forth of the rest according to their *natures*, but by the way we must Note, that *young* and *tender Trees* of Body, begin First to move from the *bottom* of the Body, *shaking* their *boughs* and *leaves* together. *Herbs* likewise whether they bear *flowers* or *fruits*, have trembling *motions*, according to the conditions of the *winde* which bloweth them, and also accordingly as they are *forced* or *oppressed* of any thing; as for example, an *Ear* of *Corn* when a *Bird* sits feeding upon it, which will not only make it *bend*, but even weigh it down to the *Earth*, as well observed that *Country Fellow* in *Greece* of a  
Painter,

*Painter*, whether it were *Aristides* or *Pamphilus* I do not well remember, who had painted a *Bird* upon an *Ear of Corn*, without making the *stalk* bend a jot: In like sort the motions of other unsensible things, as quivering of *Feathers*, of *wings* and *plumes*, the wreathing of *ropes*, the knots of *bands*, flying of *straws*, *dust*, &c. must be expressed according to the violence done unto them, to the end there may no occasion be given unto the meanest, to tax and carp at *Painters* (otherwise most excellent;) as not long since fell out, in the work of a good carver; vvho in the vvrong side, vvhere he had carved *Michael Angelo*, made a blind *Beggar*, led by a *Dog* tyed with a string about his *Neck*, which seemed to be so stretched, that it was as stiff as a staff, without any bowing: which gave occasion to a waggish *Boy* to scoff at it, saying, that if the *Dog*, had straitned the string so harde, he had either been strangled, or not able to go any farther, which caused certain *Painters* which were there to break into an extreame laughter.

Many such blame worthy motions may be found in *Pictures*, which would not so easily escape the hands of *Painters*, if in every thing they *Paint*, they did consider, that it is their own disgrace be it never so small, as the most diligent *Leonard*, and *Cæsar Seftius* did out of whose hands there never came any unperfect piece of work; for in the smallest herbs, you shall find their most true *Proportion*, and *Natural Motion*.

*Albertus Durerus* was no less careful in this behalf, as may sufficiently appear by his prints and coloured pieces, in which you shall find the legitimate motions, even unto the smallest hairs of the beard, as in that of the Duke of *Saxony*, which was also drawn again by *Titianus*, and afterwards in the hairs of *St. Sebastians* dog, in the print



of the *horser of sense and death*, and in the *great leaves of Adam and Eve*.

The *motions of the Sea* must be otherwise expressed by representing the divers *agitations of the waters*, as likewise in *rivers*, the *flashing of the waters upon Boats*, and *Ships floating up and down on the waters*, through the *uncertainty of the surges and the Ships resistance*. We must also represent the *motions of waters falling down from an high place*, but especially when they fall upon some *Rock or stones*, where you shall see them *spirting up into the Air*, and *sprinkling all about*.

*Clouds* also in the *Air* require to have their *motions* judiciously expressed, now gathered together with the *winds*, now violently *condensated into Hail, Thunderbolts, Lightning, Rain*, and such like *Meteors*: Finally you can make nothing, which requireth not his *proper motions*, according unto which it ought to be represented, but having hitherto sufficiently (as I suppose) discoursed of these kind of *motions*, I will here shut up all with the most *hot and vehement motions of the flaming Fire*, hastening towards an end as that doth naturally, although it be diversly *stirred and blown* with the wind, whereby notwithstanding gathering more *force*, it is *augmented and increased*.

# Art of Miniture

O R

## L I M N I N G.

I Hope that no Ingenuous person, will be so bold to attempt this *Art*, before he can *design*, (that is to say) further than Copying any *Picture* in *black* and *white*, as *Cole*, *black Chalk*, *black Lead* or the like. It is necessary to draw much after good *Heads* of *plaster* of *Paris*, because the difference is much more difficult to draw after a round then a flat, and after you have practised much by the *Heads* of *plaster*, you must endeavour to draw much after the life, in *black* and *white*, before you undertake the *Art* of *Limning*.

The *Colours* to be used in *Limning* are termed thus;

Whites	{ Flake white Serus	Red	{ Carminé, Indian Lake, Red Lead, Indian Red, Burnt Ocur, &c.	Yellow	{ Maslicot, Yellow ocur, Eng. ocur, Pinck.

Greens	{ Sap Green, Pinck and Bice, Green Bice, Terra Vert.	Blews	{ Ultra Marine, Dutch Bice, Smalt, Indigo.

Browns	{ Gall Stone, Mumme, Cullins Earth, Umber, Rust.	Blacks	{ Ivory black, Sea-cole, Lamp black, Cherry Stone.

As for *Vermillion*, *Verdigrease*, *Orpiment*, &c. they are too coarse and gritty to use in water colours; *Turnsoile*, *Litmus*, *bleu*, *Rosset*, *Brasil*, *Logwood*, *Saffron*, are more fit for washing prints then curious *Limning*.

The way and manner of preparing colours,

*White Lead.*

To make your white lead that it shall neither rust nor shine, both which are no small inconveniencies in the *Art of Limning*, therefore before you grind either of them, lay them in the *Sun* two or three dayes, which will exhale those greasy and salt humours that poison and starve the colours, besides you must scrape away the superficies of the white lead, and only reserve the middle of it, then grind it with fair water, or rosemary water, upon a *Pebble* or *Porphire*, when it is ground have in readines a chalk-stone with furrows in it, into which furrows put the colour while it is wet, and so let it dry in the *Sun*, and it will be exceedingly cleansed thereby, after it is through dry it must be washed in spring-water; as for example,

Let one Instance serve for all

*Colours to be washed and how.*

TAKE a Pound of white lead finely ground, put it into a bason of spring water, stirr it a while together, till the water be all coloured, then let it stand, and you will soon perceive a greasy scum to arise, which scum blow off and powre the coloured water into a clean bason, leaving the grosser Body at the bottome of the bason behind, it being good for nothing but grosser uses, let the purer part stand One howre or Two, untill it is quite settled, then powre off the water from the colour, and put it in fresh water, and stirr it as before mentioned, then



then let it settle half the time that it did at first, and then powre off the *water* into a clean *bason*, leaving the *courser* part behind, and when it is dry put it up into *papers* for your use; then let the other *water* which you powred off, settle, and then powre off the *water* from it, and take the *colour* when it is dry, and *paper* it as before, for your use: *colours* thus refined five or six times over are the *purest*, and most fit for the best use, and when you use it spread a little of it about a *shell*, with your *finger*, and temper it with *gum water*.

Colours to be vvashed are these following.

*Red Lead* or *Mene*, *Masticot*, *green Bice*, *blew Bice*, *Smalt*, *Ultramarine*, *Sapgreen*.

Colours to be ground are these.

*White Lead*, *Serius*, *Indian Lake*, *Brown Oker*, *Yellow Oker*, *Pinck*, *Indigo*, *Umber*, *Cullins earth*, *Cherry stone*, *Ivory*, *Lamp black*, *Indian red*.

Of the Nature of Colours in general

*English Ocur*.

*Yellow*) This colour lies even in the *shell* of it self, and is of great use, especially if well ground.

*Pinck* mixed with *Bice*, a good green.

*Green*) The Fairest *Pinck* is best, well ground and tempered with *blew Bice*, allowing one quantity of *Pinck* to three of *blew Bice*; to deepen this colour in *Landskip* or *Drapery*, mix with it a little *Indigo* finely ground.

*Umber*.

*Brown*) This colour is somewhat greasy, to cleanse it, burn

burn it in a *Crucible*, afterwards *grind* it and it will be good.

*Indian Red.*

*Dark Red*) Because this colour is very coarse, you may use *Umber*, and a little *lake* tempered, which is as good.

*Black.*

*Black*) *Ivory* and *Cherry-stone*, are both to be burnt in a *Crucible*, and so ground; *Cherry-stone* is good for *Drapery*, for a *black Sattin*, temper with it a little *white*, *Indian Lake*, and *Indigo*, heighten it with a lighter mixture, deepen it with *Ivory black*, this was *Hilliards* way.

*Ivory Black.*

*Black*) Grind *Ivory* with a pittance of *white Sugar Candy*, which will preserve it from crackling out of your *shell*.

*Indian Lake.*

*Purple*) Grind this with a little *gum water*, and when it is ground fine, before you put it into the *shell*, mix a little powder of *white Sugar Candy* vvith it, vvhich vvill preserve it from crackling, after this temperature you may spread it thinly vvith your *finger* about the *shell*.

*Observations in Grinding.*

Leave not your colour too moist, but thick and clammy, if after your colour be dry in your *shell*, your rubbing your *fingers* thereon shall find any to come off, it must be better bound vvith *gum*, and if too much *gum*, it will shine and be apt to crackle off after it is used.

*To wash Bice.*

*Blew*) Grind your *Bice* first very purely, then fill a large

large *shell* with cleane *water*, put the *Bice* therein and stir it, then let it settle One hower, take off the *scum* and powre off the *water*, then reserve the bottom when it is dry for use: To deepen this, use *Litmus water*.

### *How to choose your Pencils.*

Choose such *Pencils* as are cleare and sharp pointed, not dividing into parts; of these you must have in readinesse a severall *Pencil*, for every severall colour.

To prepare a *Tablet* to work on with *Miniture* for Pictures by the life.

Take an ordinary playing *Card*, polish it with a *Dogs Tooth*, and make as smooth as you can the white side of it, cleansing it from all spots and extuberances; then choose of the best abortive parchment, a Piece proportionable to your *Card*, which piece with fine and cleane *starch* past fast on the card, temper the *starch* before you past it on, in the palme of your hand, that it may be free from *Knots*; let the card thus pasted dry, then making your grinding-stone as cleane as may be, lay the card thereon with the parchment side downwards; then with a *Tooth burnish* or polish the backside as hard as you can, Note that the outside of the skin is best to *Limne* upon, and must therefore be outmost.

### *The Ground colour for a Face.*

Your card thus prepared, you are to lay a ground or primer of flesh colour before you begin your work, and that must be tempered according to the complexion of the Face to be drawn; if the complexion be fair, temper white, red lead, and lake, if an hard swarthy complexion, mingle with your white and red a little fine *Masticot*, or



*English Ocur*, but Note that your ground ought alwayes to be fairer then the *Face* you take; for it is a *facile* matter to darken a light colour, but a difficult to lighten a deep one; for in *Limning* you must never heighten, but work them down to their just colour.

Your ground thus prepared, you must lay it on the card, (ordered as before) with a *Pencil* bigger then ordinary, lay it on as *smooth*, *even*, and free from hairs of your *Pencil*, as 'tis possible, which that you may do) fill your *Pencil* full of colour, rather *thin* or *watrish*, then *thick* and *groß*, and with two or three *dawbes* of your great *Pencil*, lay it on in an instant, the nimbler it is laid on, the evener the colour will ly.

Note that you ought to cover rather too much then too little with this *prime*; cover somewhat more of the card with the ground colour, then you shall use for the *Face*.

This done, take a pretty large *Pallet* of *Ivory*, and before you begin to work, temper certain little *heaps* of several *shadows* for the *Face*, which you must temper with your *finger* about the *Pallet*.

### *The Order of Shadows for the Face.*

*Shadows* In all your *Shadows*, remember to mix some *white*, (*exempli gratia*) for the *red* in the *Cheeks*, *Lips*, &c. temper *Lake*, *red Lead*; and a little *white*, for the *blew*, as the *Veins*, &c. a little *Indigo* and *white*; for *blew* *Bice* is never used in a *Face*, for the faintest and weakest colour or shades, *Lake* and *white*, a little *Ocur*, and a little *Indigo*, adding thereto if you will a small pittance of *Pinck* or *Masticot*, for the deeper shadows, *white English Ocur*, *Umber*, for the darkest and hardest shadows, use *Lake* and *Pink* mixt with *Umber*: Note that *black* must not by any means be used in a *Face*, for other shadows your  
own

own observation must direct you, for it is impossible to give a general *Rule* for the *shadowes* in all *Faces*, unless we could force *nature* to observe the same *method* in *composing* and *modelling* them, so that one in every *pun-tilio* should resemble the other.

For your *Light* to draw by a *Northern* is accounted best, which if it fall *sloping down* from an high *window*, is best.

Place your self to your *Desk*, that the *light* may strike in *sidelong* from the *left-hand* to the *right*, and observe that in all your *works* it will shew to the best *advantage*, when it is turned and seen by the same *light* it was drawn by.

Let a *Saucer* or clean *Shell* of fair *Water* be ever on your *right hand*, wherewith you may temper your *colours* and wash your *pencils*, together with a *brush pencil* dry, to cleanse your *work* from *dust*; also a *sharp penknife*, wherewith to take away such *specks* or *hairs* as may casually mix with your *colours*, or fall into your *card*; you may also conveniently cover your *picture* with a piece of *paper*, whereon to try your *pencils* before you begin to work.

*Necessaries  
in Limning.*

### To begin a Face.

Having these accommodations, draw the *lines* of *porphile* (i. e. the outmost *stroak*) of a *Face* with *lake* and *white*, mingled very *faint*, by this you may conveniently mend the *draught* ( if *false* ) with a *deeper mixture* of the same *colour*, the *lines* being *exactly* drawn, and *true proportion* observed ( which is the chiefest thing of concernment ) next observe the *deeper* and *more remarkable shadowes*, and with the same *faint Crimson*

*The first  
draught.*

colour of *lake* and *white*, give some *slight touches* and marks somewhat *roughly* of these *shadows*, which afterward you'll finish.

*The Order to be observed in drawing by the life.*

*The Order of  
drawing first  
sitting.*

First you must only *dead colour* the *Face*, as the *Oyl-painters* do, and not meddle with the rest, and this first sitting commonly takes up two hours.

*Second sitting.*

The second sitting vwill require Four or Five hours, in that time you are to go over the *Face* very *curiously*, observing what ever may conduce either to *likeness*, or *judicious colouring*, also observing of the several *graces*, *beauties*, or *deformities*, as they appear in *nature*, or else in *smoothness* of shadows, or *close* and *sweet couching* the colours.

*Third sitting*

The third sitting commonly takes up two or three hours, and is spent in *closing* vwhat vvas before left *imperfect* and *rough*, but principally in giving to every *deep shadow*, the *strong touches* and *deepnings* as well in the *dark shadows* in the *Face*, as in the *Eyes*, *Eyebrows*, *Hair* and *Ears*, and these *touches* are ever the last part of this *business*, and are never to be done till all the *Hair* and *Drapery* be finisht, these *touches* (if well done) add exceedingly to the life.

*Concerning dead colouring.*

The *dead colouring* of a *Face* is to be done the *roughest* and *boldest* of all; having drawn your *Face* with *lake* and *white* (as before) you must take to the said colour a little *red lead*, tempering it to the colour of the *Cheeks*, *Lips*, &c. but very *faintly*, because you cannot *lighten* a *deep colour*, without hazard of spoiling the picture.



The first colour to begin the *Face* with, is the red of the *Cheeks* and *Lips*, somewhat strongly the bottome of the *Chin*, if the party be *beardless*; over under and about the *Eyes* you will perceive a delicate and faint redness, and underneath the *Eyes*, inclining to purple colour, which in fair and beautiful *Faces* is usual, and must be observed; the tip of the *Ear*, and the roots of the *Hair* are commonly of the same colour.

To begin to  
Limn.

All this you must do after the manner of *hatching*, with faint and gentle strokes, washing it all along. In short, in your *dead colouring* you must cover your ground with the aforefaid red, and the subsequent shadows.

Note) Be not too curious in your first working, but regard a good bold following of nature, rather than smooth curiosity, the roughness of the colour, you may end at another sitting.

### The second work of Limning.

The red being done, the next is the faint blews about the balls and corners of the *Eyes*, and the gray and blewish under the *Eyes*, the *Temples*, &c. which you are also to work from the uppermost part of the *Face* almost all over, but exceeding sweet and faint, by degrees, sweetning and beighning your shadows, as the light falls. And in going over the *Face*, be sure to mark out the hard shadows in the dark side of the *Face*, under the *Nose*, *Chin*, *Eyebrows*, &c. As the light falls, and somewhat strong touches, in those places bring up your work together in an equal roundness, not giving perfection to to any particular part of the *Face*, but visiting all the parts curiously, and in a kind of randome, by which means you will better observe the likeness, roundness, postures, colouring, or what ever else is requisite to the perfection of your work.

The second  
Procedure.

*The third  
Procedure.*

Having done the *fainter or lighter shades*, and somewhat smoothed and wrought them into the *red*, you may go over the *hair*, disposing into such *forms, folds or tramels*, as may become your *Picture* best.

You must at first only draw them with *colour* as near as you can, *suitable* to the *life*, and after wash them lightly at the first, and then once more peruse your *work*, being careful to fill up the *void, empty and bare places*, which are uncovered with *colour*, and at last deepen it somewhat more *strongly* then before in the *deepest shady places*, still carefully observing the *life*; thus much for the *first sitting*.

*The Order of Limning in the second sitting.*

The party being set *just in* his former *Seat*, you must most *exactly* observe and *curiously delineate* with your *pencil*, those several varieties of *nature*, which you did *rudely trace* out before, to do this you must use the same *colour* in the same *places* you did before, *working, driving and sweetning* the same *colours* one into another, to the end that nothing be left in your *work* with a *hard edge, uneven, or a lump* together, but also so *swept and driven* one into another, with the *point* of somewhat a *sharper pencil*, then you used at the first as that your *shadows* may lye *soft and smooth*, being *dispersed and gently extended* into all, and towards the *lighter parts* of the *Face*, like *air or a vapoury smoak*; but before this you must carefully observe all the *shadows and colours*.

*The ground behind  
the Picture.*

For the *Ground* behind the *Picture*, it is commonly *blew or crimson*, somewhat like a *Sattin or red Velvet Curtain*: if *blew* you must lay it thus, your *Bice* being *pure and cleare washt*, temper as much in a *shell* as will cover a *Card*, let it be all throughly *moist* and

and well bound with *gum*, then with a small *pencil*, go about with the same *colour*, the *porphile*, that is the utmost *stroke* and *ambient superficies* of the *Picture*; this done take a greater *pencil* and therewith *wash* over somewhat carefully the whole *ground* that you mean to cover with a *blew*, somewhat *thin* and *watrish*, and then with a reasonable *big pencil* full of *colour* and *flowing*, lay over that *place* with a *thick* and *substantial* *Body of colour*, which before you had only *wash* over, in the doing of this you must be very *swift*, keeping *colour moist* that you have laid, not permitting any *part* to dry til the whole be covered.

### A Crimson Ground.

If you would have your *Ground* *Crimson* like *Sattin*, you must with *Indian-Lake* trace out where and in what *places* you will have these *strong* and *hard lights* and *reflections* to fall, which is seen in *Sattin* or *Velvet*, there lay your *lights* with a *thin* and *waterish lake*, and while it is yet wet with a *stronger* and *darker colour* of *lake thick ground*, lay the *deepning* and *hard strong shadows*, close by the other *lights*; your best way is to have a *piece of Sattin* before you to imitate.

A Crimson  
Ground.

After this lay your *linnen* with a *flat white*, and the *Drapery* likewise *flat*, then go over your *face* again, endeavouring to reduce each *shadow* to its *true perfection*, then draw the *lines* of the *Eyelids*, expressing the *red dark Nostril*, the *shady entrance* into the *Eares*, the *deepness* of the *Eyebrows*, and those more *perspicuous notes* and *marks* in the *face*, with a *pencil* somewhat more *curious* and *sharp* then before, you may *darken* your *ground* as you see will be most *advantageous* to the *setting out* the *Picture*.

For Method in  
the Touches.



*The Hair* Next go over your *hair heightning* and *deepning* it as you shall see by the *life*, drawing some *locks* loosely over the *ground*, which would otherwise seem unpleasant.

*Linnen Shade.* To *Shadow in Linnen*, use *black*, *white*, a little *yellow*, and *less blew*, the *black* must be *deepned* with *Ivory-black*, with which mix a little *Lake*, and *Indigo*, or *Litmus blew*, thus much for the second sitting.

*The manner of finishing at the third sitting.*

*Third sitting.* The third will be wholly spent in giving the *strong touches* and observations necessary for the *rounding* of a *face*, which you will now better see to do, the *apparel*, *hair* and *ground*, being already finished. In this sitting *curiously* observe whatever may conduce to *similitude*, which is the chiefest thing, as *Scars*, *Moles*, &c. *glances* of the *Eyes*, *descending* and *circumflexions* of the *Mouth*, never make your *deepest shadows* so deep as they appear in the *life*.

*Thus much of the Face and three sittings,*

*For Ornaments thus.*

*Ornament.* *Armour silvea*) for colouring armour, first lay *Liquid silver* flat and even, which dried and burnisht with a *Tooth*, temper the shadows with *Silver*, *Indigo*, *Litmus*, and a little *Umber*, work these shadows on the *Silver* as directed by the *life*.

*Gold Armour.* For the gold armour, lay gold as you did silver, for the *Shadow*, *Lake*, *English Ocur*, tempered with a little gold.

*Pearls.* To express roundness and lustre of *Pearls*, your *ground* must be *white* and *Indigo*, your *shadow* *black* and *Pinck*,

*Dia-*

*Diamonds* are exprest with a ground of flat *Liquid silver*, the deepning is *Cherrystone*, black and *Ivory*; the deeper the shadow, the fairer the *Diamond*.

Lay a ground of *silver*, burnisht to the bigness of the *Ruby*, then take *Turpentine* of the best and purest, and temper with it very neat a little *Indian Lake*, then taking a needle, or some small *Iron instrument* heated in a *Candle*, (lay or drop) a little of the composition upon the *silver*, fashioning the stone in a round or square, or what fashion you please, with the point of your instruments, you must let it lye a day or two to dry, if it be too long in drying, add to your composition a little powder of clarified *Mastick*; This receipt is not commonly known.

For any green stone, temper your *Turpentine* with *Verdigrease*, and a little *Turmerick root*, first scraped with *Vinegar*, then let it dry, then grind it to fine powder, and temper it.

Mix *Turpentine* with *Ultramarine*, &c. Note that the ground to all must be *Liquid silver polish*.

### A true Receipt to make liquid gold.

Take of fine leaf-gold, the Value of 2s, 6d, grind this gold with a strong and thick gum-water upon a reasonable large stone, which you must grind very fine, and painfully; as you grind it, still add more of your strong gum-water, and though the gold look never so black and dirty 'tis never the worse, having brought it to a competent fineness, wash it in a great shell as you did *Bice*; &c. Being very clean add to it a little quantity of *Mercury sublimate*, with the point of your Knife, which you must temper with it, and a very little gum to bind it in the shell, and as it settles, and begins to dry

in the *shell*, shake it together, and remove and spread the *gold* about the sides of the *shell*, that it may be altogether of one *colour* and *fineness*, use with fair *water*, as you do the other *colours*.

*Note.* So for *liquid silver*, only observe (and 'tis a secret) that when your *silver* either with *long keeping* or *moistness* of the *Air* becomes *starved* and *rusty*; you must to prevent this inconveniency, before you lay the *silver Cover* over the *place* with a little *Juice* of *Garlick*, which will preserve it.

### Of *Landskip*.

*Landskip.* In drawing *Landskip* with *water colours* ever begin with the *Skie*, and if there be any *Sunbeams*, do them first. *Purple Clouds.* For the *Purple Clouds*, only mingle *Lake* and *white*.

*Yellow.* The *Sun-beams*, *Masticot* and *white*.

*Note 1.* Work your *blew Skie* with *smalt* only, or *Ultramarine*.

*Note 2.* At your first working dead *colour* all the *piece* over, leave nothing uncovered, lay the *colour* smooth and even.

*Note 3.* Work the *Skie* down in the *Horizon* fainter as you draw near the *Earth*, except in *tempestuous skies*, work your further *Mountains* so that they should seem to be lost in the *Air*.

*Note 4.* Your first *ground* must be of the *colour* of the *Earth* and *dark*; *yellowish*, *brown*, *green*, the next successively as they loose in their distance must also faint and abate in their *colours*.

*Note 5.* Beware of *perfection* at a distance.

*Note 6.* Ever place *light* against *dark*, and *dark* against *light* (that is) the only way to extend the *prospect* far off, is by opposing *light* to *shadows*, yet so as ever they must loose



loose their *force* and *vigor* in proportion, as they remove from the *Eye*, and the strongest *shadow* ever nearest *band*.

*A Dark Green.*

For a *dark green* for *Trees* mingle *Verduter*, *Pinck*, and *Indigo*, the deepest *shadows* of all in *green* are made with *sap green* and *Indigo*.

*A Rare secret to preserve Colours.*

Take *Rosemary water* double distilled, and with a few drops of it, temper your *shell of white*, and you shall see it become instantly perfect *white*, however dead and faded it was before, besides this *water allayes* the Bubbles in *white* and *umber*, which are usually very troublesome in the grinding them.

*Some general observations in Miniture.*

1. If your *colours* peel or by reason of the greasiness of your *Parchment* will not lie on, mix with them a very little *Ear wax*, and t'will help them.

2. Sit not above two yards from him you draw by.

3. Draw not any part in the face of a picture exactly at the first, neither finish a *Mouth*, *Eye* or *Nose*, till the rest of your work come up, and be wrought together with it.

4. When you have finished the *Face*, make the party stand up to draw the *Drapery* by him.

5. Let the Party you draw be set in an higher seat then your self that draw.

*To make Crayons or Pastils.*

*Pastils.* To instance one for all, if you were to make a *Pastil* for a *brown complexion*, grind on your stone, *serus*, red lead, or *vermillion*, *English ocre*, and a little *pinck*; to this add a proportionable quantity of *plaster of paris*, burnt and finely sifted, mix this with the other colours, and you may role it up.

*Note.* Mix white *Serus* with all your other colours, and some instead of *Serus* use *Tobacco pipe clay*.

*To make white.*

*Serus.* Take two parts of ordinary *chalk*, and one part of *Allum*, grind those together, fine, make them up in a lump, burn them in a *Crucible* and use them.

*To make white Lead.*

*White Lead.* Take a *Crucible* whereinto put several smal plates of clean *Lead*, cover them with *white wine Vinegar*, luit the *Pot* close and dig an hole in a dunghill, where let it abide for the space of six weeks; Take it it up and scrape off the *superfluities* of the *white Lead*, and so use them.

*To prepare a Card for a Picture.*

Wet a card all over with a great pencil so soone as the water is sunck in, burnish it smooth on the back-side, having tempered some starch with a knife in the palme of your hand spread it over, instantly lay on a piece of abortive parchment, let it be prest in a book till it be almost dry, then smooth it on the back-side.

*To preserve Colours fresh*, grind them with the gall of a *Neet*.

*To prepare White Excellently.*

*white.* Take some *Serus* which being grossly bruised and put

put into a fine earthen *Bason*, put to it a good quantity of running water distilled, wherein wash the *Serus* till it be thoroughly clean and purged, which you shall know by the Taste of the water, which is drained from thence.

Is made thus, take of *Oyl of Turpentine* one *Vernish* pound, *Sandrake* one pound, *Oyl of Spike* one pound, mixt the *Oyles* together, and let all stand over the fire till the *Sandrake* be dissolved, if the fire should chance to catch hold on this, clap a pewter dish over it.

*Concerning Wax-work or Moulding, to make the Moulds.*

Take a good big lump of plaister of *Paris* and *The Mould* burn it in a *Crucible* till it be red hot, let it cool, then beat it very fine, and searse it through a *Tiffany Sieve*; be very cautious that the wind come not at it, for that will hinder its hardening; after it be tempered keep it wrapt up in a clean brown paper, use it thus; take any Earthen or Pewter Vessel, that is shallow, and put ten or twelve spoonfulls of fair water in it, then prepare your fruit, and bind a rag round it like a cord in a wreath long wayes on the fruit: then take some linsed Oyle or (which is more cleanly) Oyl of sweet Almonds, with which in a pencil besmear the Lemmon, or (what other fruit it be) on the one side, which lay uppermost, your Lemmon thus prepared, take some of your sifted plaister of *Paris*, and temper it in the fore-mentioned water to a pretty thickness, then as speedily as may be with the help of your spoon, cast it on the oyled Lemmon, lay it on very thick, least the thinness of the Mould spoil the work, when 'tis hardened (which will be in a small time) take away your rag, leaving the linnen still fast in it's half mould; which done turn the hardned side downward, then Oyl the other half of the Lemmon together, with the edges of the



mould, which the rag did cover; then wash your porringer or vessel where the former plaister was clean and prepared, and cast on more plaister of Paris as before, observe, it must not be too thick when you cast it on, and after 'tis hardned, you must put no more water to it, for then it will crumble; when you have done the moulds so, and made a notch that one may fall fully into the other, tye them close together, having before well Oyled them, and keep them for use.

To cast in these Moulds.

To cast. Use the whitest and purest Virgins wax.

To colour the wax answerable to the things you mould.

To colour. For a Raddish your ground is Serus, which must be afterwards painted over with Lake, the top of the Raddish painted with Verdigrease, all other such colours must be tempered with gum water; gum water is thus made, dissolve a lump of pure gum Araback about the bigness of a Walnut, in two spoonfulls of fair water, herewith temper your colours.

Note that every thing Mouldable is either all of one, and the same colour, as a (Lemmon) or striped and particoloured with different colours, as a Pear, Pearmain, &c. Now such as are of one colour may be easily cast all of the same colour; but such as are varicated must be kept out afterwards by colours tempered with gum water (as above) you colour your wax by putting into it whilst it is hot and melted in a Gally-pot, a little linnen bag of that colour you use, provided that the colour be before bruised very fine.

As to particulars for the Lemmons or Apricocks, take only Turmerick in a bag, for Oranges turmerick and red Lead well tempered; Apples, Pears, or Grapes, turmerick and a little Verdigrease, Wallnuts and Figs, mix turmerick and English Ocur, and Umber all in a bag together, Cucumbers

or *Hartichoaks*, *Peescods* or *Filbirds*, *turmerick*, *verdigrease Eggs* and *Serus*, all put into several baggs and slept in the *Virgins wax*, when 'tis melting as before mentioned, for *Damason* bruise *Charcole*, *Indigo* and blew starch in a bag together, for *flesh colour*, *white Lead*, and *vermilion* mixt, &c.

To counterfeit *Rochcandid* sweet meats.

Dissolve the quantity of a walnut of gum *Araback* *Rochcandy.* in two spoonfulls of clear water, let it be very thick, then take any piece of broken *Venice glass*, the thicker the better, beat it in a mortar, so small as you please, that it may serve your occasion, daub over some cast sweet meats, with the fore-mentioned gum water, strew this powder on them, and t'will with much delight satisfie the expectation,

Additional Observations out of a *Manuscript* of *Mr. Hilliards* touching *Miniture*.

When you begin to *Limn* temper all your colours fresh with your *Finger*, in your *shell*, or on your *pallat*.

*Pearl.*

Your *Pearl* must be laid with a white mixture, with a little black, a little *Indigo* and *Mastick*, but very little in comparison of the white, not to the hundreth part; that dry, give the light of the *Pearl* with a little *silver*, somewhat more to the light then the shadowed side, then take a white allai'd with *Masticot*, and underneath the shadowed side give it a compassing stroak, which shews a reflection, then without that a small shadow of *Seacole* undermost of all: But note, your *silver* must be laid round and full.

The manner how to draw with *Indian Ink*.

To draw with *Indian Ink* after the manner of washing, or instead of *Indian Ink* take *Lamp-black* or *Bread burnt*, temper a little of your *Indian Ink* with fair water, in

a shell, or upon your hand, your outlines being drawn with Cole or black Lead, take an indifferent long sharp pointed pencil, dip the point into fair water, then dip the pencil into the Indian Ink, and draw all your outlines very faint, (Note that all the temperature of Indian Ink must be thin and waterish, and not too black) when it is dry, take a little crum of stale white bread, and rub out the outlines which you drew with the Cole, (if too black) then dash on your shadows very faintly, and deepen it by degrees, as you think convenient, then finish it with stipples, it being most advantagious to any one that shall practice Limning, beware of taking too much colour in your pencil, which you may prevent by drawing the pencil through your Lipps; in laying on your shadows, never lay them too deep, but deepen them down by degrees, for if too deep you can never heighten them again.

*How to prevent your colours from sinking in.*

Take Roach Allum and boyle it in spring water, then take a bit of a sponge and dip it into the water, and wet the back-side of your paper that you intend to draw on, very thin, whilst the water is hot, in the wetting of it be as nimble as you can, and this will prevent it from sinking.

*The manner how to draw with water colours upon Sattin.*

Take Izing glass and steep it Four and twenty hours in water, then boyl it in spirit of wine untill it be very clammy, which you will perceive by dipping your finger into it, then after your outlines are drawn upon the Sattin, take an indifferent big pencil, and wash it thin over as far as your outlines are, which will prevent your colours from sinking or flowing.

*A farther observation in grinding of colours.*

Observe in grinding ultramarine and other colours, that your



your *motion* be not too *swift*, but grind it *gentle* and *slow*, because the *swiftness* of the *motion*, causeth the *stones* to *heat*, by which consequence your *colour* will *starve* or *loose* something of it's *Lustre*, especially if it be a *colour* of no great *Body* as *Pinck* and *Indigo*, &c. observe, in grinding *white*, that you grind it not too much, least it prove *greasy* or *oily*, or of a *dirty colour*.

*How to prepare Umber.*

Take *Umber* and grind it very *fine*, put it into an *earthen pot* or *gally pot*, of *fair water*, cover it over and keep it from *dust*, and in *frosty weather*, let it *freeze* untill it *thaws* of it self, then *power off* the *water*, and when it is *dry* put it up in *paper* for your use. And when you *temper* it in your *shell*, use a drop or two of *white Onyon water* which will *preserve* it from *crackling*.

## The Art of Etching.

*The Grounds and Rules of Etching.*

**B**Efore that you begin to *Etch* upon *copper*, it is very necessary to *practise* the *Art of drawing*, till you be able if need require to *draw* any *head* after the *life*, or to *draw* a *design*, for if you intend to *practise* the *Art of Etching*, you will find it very profitable to *draw* after good *prints*, which are well *designed*, and *graved*, and when you have *practised* so long that you are able to *copy* any *print*, or *drawing* very *exactly*; then *draw* after good *Heads* of *plaster* or *figures*, according to your own *fancy*, which will learn you to *shadow* according to *Art*, if well observed, therefore be sure when you *draw* after *plaster*, to observe very exactly to take the true *outlines* or *circumferences*, and then take notice how the *shadow* falls, then *shadow* it very *faint* and *soft*, vvhhere need requires. The *prints* which I recommend unto you as *absolutely* the *best* to

learn to Etch or Grave after, be the prints of *Henry Goldsbis* and *Hermon Muller*, therefore it is very convenient to leaan to hatch vwith the Pen exactly after either of the aforefaid prints of *Goldsbis* or *Muller*, and when you have brought it to that perfection; and can draw very well after plaister, you may practise to draw after the life; but before you draw after the life, you must be very exact and true in your outlines or circumferences.

*The Instruments with their particular names  
which are used to Etch withall.*

A Copper plate polished, a piece of ground bound up in a piece of Silk or Taffatae, and preserved from any dust or grease; and about twenty Needles of all sizes, the best are made at Cleafe; then take the Needles and set them indifferent deep into some round slender sticks about a span long, with a Needle at one of the ends of the sticks, and a pencil at the other, a scraper, a polisher, and two or three good French gravers, well ground and whetted, and a pair of Compasses, a Ruler, some green wax, a Bottle which holdeth some half a pound of single Aqua fortis stoped close with soft wax, some white Lead, a Stiff, a hand Vice to hold the Plate over the fire, an Oyl stone.

*The use and property of every particular Instrument.*

The Copper Plate is the only matter to Etch upon; the ground is to lay upon the Copper Plate, when they are both warmed; your Needles are to hatch withall upon the ground, the pencil is to wipe away the bits of ground, which rise when you hatch upon the ground with your Needles, the scraper is to scrape out any thing that is amiss, the Polisher is to make smooth any place that is rough, so that you can mend any place that is amiss according to your own Mind; the Gravers are to mend here and there a stroak where need requires. But note, that your Gravers must be ground, and whet very sharp and smooth, upon an Oyl stone before you use them,  
your

your *Compasses* are of very little use in *Etching*, except it be to *measure* a *distance*, or *strike* a *Circle*, the *Ruler* is used to *hatch* all the *straight hatches* or *Lines* upon the *Plate*. The *green wax* is used to make a *Wall* round about the *edges* of your *Plate*, to keep the *Aqua fortis* from running off from the *Plate*, the *Aqua fortis* is the finisher of the *vwork*, *vwhen* you have *hatched* the *design* upon the *Plate* with your *Needles*. The *white Lead* is used to *scrape* upon the *back-side* of the *drawing* or *print* that you *Etch* after, The *Stift* is used to *draw* through all the *outmost Lines* or *circumferences* of the *print* or *drawing* which you *Etch* after. The *Oyl stone* is to *vvhet* your *Gravers* upon; having these things in *readiness*, Note that if it be a *black Ground* that lyes upon the *Plate*, then you must take *white Lead* and *rub* it upon the *back-side* of the *print* or *drawing* which you intend to *Etch* after, but if it be a *vvhite Ground*, then you must take *black Lead*, or a piece of *Charcole* and *rub* on the *back* of your *print* as *aforesaid*.

*The manner and way to make the Ground.*

Take a quarter of a pound of *Virgins wax*, and half a quarter of a pound of *Expoltum burnt*, of *Amber* One Ounce, of *Mastick* One Ounce. Having all these *materials* in *readiness*, you must take the *Mastick* and the *Expoltum* and beat them very fine in a *mortar*; this being done, take a new earthen *Pot*, and put the *wax* into it, and set it upon the *fire*, let not the *fire* be too *hot*, which if you do it will *burn* the *ground*, therefore when they are *thoroughly melted*, take it off from the *fire*, and pour the *ground* out into a *Pot* of *fair water*, and make it up into a *Ball*, and preserve it from *dust*; and when you will use it, take a *quantity* of it and bind it up in a piece of *Taffatae* or *Silk*, and use it as *hereafter*.

*A red Ground.*

Grind *red Lead*, very well tempered with *Vernish*.



## The Art of Etching.

*A white Ground.*

Take of *wax* one Ounce, *Rosin* two Ounces, melt them together, add thereto a quarter of an Ounce of *Venice Serus*, finely ground.

*A black Ground.*

*Spaltum.* *Asphaltum* two parts, *Bees wax* one part, melt them together, being warm, lay it thinly on with a *Lawn rag*.

*Another Ground.*

Grind red *Lead* with *Linseed Oyl*; Note, your ground must be laid very thin.

*The manner and way to lay the Ground upon the Plate.*

Take some *Charcole* and kindle them, this being done, take an *band-vice* and screw it fast to one of the corners of the Plate, as near to the edge as you can, because you must lay the ground all over the Plate, then take the Plate and hold it over the fire, till it be so warm to melt the ground, then take the ground which is bound up and rub it to and fro upon the Plate till it be covered all over alike; then take of the stiffest *Feathers* out of a *Ducks wing* that is not ruffled, and spread the ground very thin, and smooth every where alike upon the Plate, but have a special care you beat not the Plate too hot, least you burn the ground; which if it be, the ground will break up when you put on the *Aqua fortis* and spoil the Plate; you may discover when it is burnt, by its rising as it were sandy, which if you perceive, you must take a clean linnen rag, and warming the Plate, wipe the ground clean off, and lay a new as aforesaid. But if you perceive the ground to be smooth and not sandy, take it off from the fire, and when it is cold, take a piece of *Link* and hold under the ground till you have smoaked it very black, but let not the flame touch the ground, least you burn it, this being done, if the Plate be cold hold it over the fire again till it be just warm, to let the smোক melt into the ground, that it may not rub off under your hand, then hold

hold it off from the fire, with the ground-side of the Plate downwards for to preserve it from the dust, otherwise when the ground is warm, dust will flye in and spoil it, therefore you must hold it with the ground-side downwards untill the ground is cold.

*The way to draw the outmost lines of any Print or drawing upon the ground of the Plate.*

First take the drawing or Print which you intend to Etch after, and scrape a little white lead upon the back-side of it, then take a feather and rub it over every where alike, and shake off that which remains, then take the print and lay it upon the Plate on that side the ground is, then fasten the four corners of the print to the Plate with a little soft wax; this being done, take the Stift and draw upon the print all the outmost circumferences and lines exactly, and when you have so done, take off the print from the Plate, and all the same outlines and circumferences which you drew upon the print with the Stift, will be exactly and unfailably upon the ground.

*Several Observations in Hatching.*

First observe exactly and judiciously how your principle is shadowed, and how close the Hatches joyn, and how they are laid, and which way the light falleth or cometh; the light must fall all one way, for if the light fall side wayes in your print, you must hatch the other side which is farthest from the light darkest, and so place your lights altogether on the one side, and not confusedly to have the light come on both sides alike, as if it stood in the midst of many lights, for neither doth the light withall its brightness illuminate any more then that part that is directly opposite unto it, then observe exactly how close all the Hatches joyn, and how they are laid, and which way they twist and wind, then follow them as exactly as possibly you can, but before that you begin to Hatch or shadow, you must draw all the outmost lines with a Needle

Cc

upon

upon the ground, as *Artificially* as you can; and then you must *shadow* it with your *Needles* of several sorts according to your *principle*, and when you will make a *broad stroak*, then break off the point of a great *Needle* and whet it upon an *Oyl stone* four square untill it comes to a point; and if you will *hatch fine stroaks*, then you must use *fine pointed Needles*; and if *middle sizes*, then break off the point of a *middle size Needle*, and whet it as aforesaid, and so according to all *sizes*. But some *Masters* when they make a *bold stroak*, *hatch* it *fine* at first, and so by degrees make them *broad*er.

### *Necessary Observations in Etching Landskips.*

Observe when you *Etch Landskips*, to make or *hatch* that which is nearest to the *Eye* *darkest*, and so let it *lose* or *decline* its *shadows* by degrees, and that which is furthest off must be *faintest*, and so *lose* equally by degrees; the same *Observation* must be in making the *Skie*, for that which is nearest to the *Eye* must be the *darkest shadowed*, but in general as *faint* and *soft* as possible, and so also let it *lose* by degrees as before is mentioned, and the nearer the *Skie* cometh to the *ground*, the more it must *lose* and be *fainter*; but when they as it were meet together the *Skie* must quite be *lost*, and when you have *hatched* it as *exactly* as you can *possibly* with your *Needles*, according to the *print* or *drawing*, that you do it after; this being done, *compare* them *exactly* and *judiciously* together, and if you find it like the *original*, take some *green soft wax*, and make a *wall* round about the *edges* of the *Plate*.

*How to make the Wax wall round about the Plate, to keep the Aqua fortis from running off from it.*

Take some *green soft wax* and *temper* it till it be *warme*, then *draw* it into a *long slender roul* as long as will reach about the *Plate*, then *flat* it and *fasten* it about the *edges* of the *Plate*, and let it be about half an *inch* high, then take



take an old *knife* and heat it in the fire, and sear the wax round about under the Plate very close, otherwise the *Aqua fortis* will run out, but be sure to fasten the wall as near to the edges of the Plate as you can conveniently, then pour the *Aqua fortis* upon the Plate, letting it lye till it be deep enough.

*How to use the Aqua fortis on the Plate.*

You must use single *Aqua fortis*. Take a quantity of *Aqua fortis* and pour it into a glass and mingle it with a little *Vinegar* to weaken it if it be too strong, or a little *Aqua fortis* which hath been used before; for in case the *Aqua fortis* work too strong, it will make the work very hard, and sometimes make the ground to break up; and when you have tempered it very well, poure it upon the Plate almost as high as the wax wall; the deeper the *Aqua fortis* lyeth, the harder it will eat, and when you perceive it to be deep enough, pour off the *Aqua fortis* from the Plate into a glass, and preserve it to mingle with other as aforesaid; this being done, take some fair water and wash the Plate, and then take off the wax wall and preserve it for the same use again; then warme the Plate and take a clean linnen rag when it is indifferent warme, and rub off the ground from the Plate very clean, then take some *Oyl* and rub over the Plate to clean it, and if you perceive that the *Aqua fortis* hath not eaten as deep in some places, as it should be, then it must be helped with a *Graver*.

*Observations by which you may know when it is deep enough.*

When the *Aqua fortis* hath lain upon the Plate a little more then a quarter of an hour, or half an hour, there being no certainty in time, because sometimes the *Aqua fortis* will work stronger then at another; therefore when you think it is deep enough, pour off the *Aqua fortis* from the Plate into a glass, then wash the Plate with a little fair water, then take a *Knife* and scrape

off a little piece of the ground where it is *hatcht*, and may be least prejudicial to the Plate, and if you perceive it not to be deep enough, take a little candle tallow and melt it in a spoon, and while it is warm, take a pencil and cover the plate with it, where you scraped the ground off, then pour the *aqua-fortis* upon it again, and let it lye till you guess it to be deep enough; then pour the *Aqua fortis* from the Plate as aforesaid, and at any time when you perceive that the *Aqua fortis* doth not work strong enough, you pour off half the old, and refresh it with some new, for when the *Aqua fortis* hath been upon the Plate about half an hour, it will be much the weaker, because the strength of it doth evaporate away, and by a little practice you will come to the certain knowledge when the *Aqua fortis* hath eaten deep enough.

*Another way to know when it is deep enough.*

Take a little piece of a Copper plate, and lay a ground upon it as you before mentioned, and make a wax wall about it, then *hatch* it with several *hatches* as you think best, and when you pour the *Aqua fortis* upon the one, pour it upon the other, and when you think they be eaten deep enough, pour the *Aqua fortis* from the little Plate, and wash it with some fair water as aforesaid, then take a Knife and scrape off a little piece of the ground from the little Plate where it is *hatcht*, and in case you perceive it not deep enough, cover the place again with some warme candle tallow, and then pour the *Aqua fortis* upon it again till you guess it be enough, then pour the *Aqua fortis* from the little Plate again, and try as before, and if you see it to be enough, pour the *Aqua fortis* from the great Plate, and wash it with a little fair water before you warm it, or else the *Aqua fortis* will stain the Plate.

*A way to lay a white Ground upon a Black.*

First you must *understand* that most grounds are *black*, and when you lay a *white ground* upon a *black* you must not *smoak* the *black* with a *Link*, and you must lay the undermost ground the *thinner*, when you lay a *white ground* upon it; and if you would lay a *white ground* upon a *black*, take a quantity of *Serice*, as much as you think will cover the *plate*, and grind it very *fine* with *gum water*, and temper it very *thin*, then take a *pencil* and wash the *plate* all over very *thin* and *even*.

*The way to lay a red Ground upon a black Ground.*

Take the *red Chalk* and grind it very *fine* with *gum water*; then take a pretty *big pencil*, and wash the *plate* all over with the *red ground* very *thin* and *smooth*, as before mentioned.

*A Receipt for a ground taken out of a Manuscript of Collots.*

Take a quarter of a pound of *Virgins wax*, and half a quarter of a pound of the best *Expolium burnt* of *Amber*, and half a quarter of a pound of *Mastick* if it be *warm weather*, because it doth harden the ground and preserve it from injury, when you lean with your hand hard upon it; if it be *cold weather*, then take but an ounce of *Mastick*; this being observed, then take an ounce of *Rosin*, and an ounce of *Shoomakers pitch*, and half an ounce of other *pitch*, half an ounce of *Vernish*; having all these materials in readiness, take a new earthen pot, and put the *Virgins wax* into it; and when it is melted, stir it about, and put in the other materials by degrees as before mentioned, and when they are thoroughly mingled and melted, take the pot off from the fire and pour it out in a clean pot of fair water, and work it into a *Ball*, and preserve it from *dust* and *grease*, and when you have occasion to make use of it, take a quantity thereof and bind it up in a piece of *Silk*, and make use of it as before mentioned.



*The Ground of Rinebrant of Rine.*

Take half an ounce of *Expoltum* burnt of *Amber*, one ounce of *Virgins* *wax*, half an ounce of *Mastick*, then take the *Mastick* and *Expoltum*, and beat them severally very fine in a *Mortar*; this being done, take a new earthen *pot* and set it upon a *Charcole-fire*, then put the *Virgins* *wax* into it and melt it, then shake into it the *Mastick* and *Expoltum* by degrees, stirring the *Wax* about till they be thoroughly mingled, then pour it forth into fair *water* and make a *Ball* of it, and use it as before mentioned, but be sure you do not heat the *plate* too hot when you lay the ground on it, and lay your *black* ground very thin, and the *white* ground upon it, this is the only way of *Rinebrant*.

*The way to preserve any Ground, which is laid upon a Plate in Frosty weather.*

Take the *plate* and wrap it very warm in a *wollen cloth*, and lay it in the warmest place you can convenient, for if the *frost* is gotten into the ground, it will break up when you pour the *Aqua fortis* upon it.

*A way to preserve the Plate from injury of the Aqua fortis, where the Ground breaks up.*

If you perceive the ground to break up in any place, pour off the *Aqua fortis* from the *plate* and wash it with a little fair *water*, then take a quantity of *Candle tallow* and melt it in a *spoon*, and while it is warm take a *pencil* and cover the *Plate* which is broken up with the said *tallow*, and so far as the *tallow* is spread, the *Aqua fortis* will not eat; some make use of *Vernish* instead of *tallow*, and when you have covered the place that is broken, pour on the *Aqua fortis* again, and let it lye upon the *plate* till you guess it hath eaten enough; then pour the *Aqua fortis* from the *plate* and preserve it, then take the *wax Wall* and preserve it also, and wash the *plate* with a little fair *Water*, then rub off your ground

as aforesaid, and for the places which the ground broak up in, it must be helped with a Graver.

Therefore it will be necessary for one that desireth to learn this Art, to practice graving a little, so much as to help a stroak where you think convenient.

*A way to make the Aqua fortis work soft or hard according to nature or art.*

First take Candle tallow and melt it in a spoon, then with a pencil cover that place so far as you will have it to be faint, but note it must be after the Aqua fortis hath lain upon your plate an indifferent while, and so by degrees you must use the tallow as you would have it fainter, this is very necessary when you Etch Landskips, which must lose and stand at a distance by degrees, therefore when you Etch Landskips, observe to stop off that place first which must be faintest, and so by degrees stop it off, and make it lose equally; and note the nearer you come to the Eye, it must be strongest and darkest shaded, but not on that side from whence the light cometh for that side must be preserved as faint as may be, but according to art.

#### *Observations in Etching Prospective.*

Prospective is a thing that is one of the difficultest Arts that is practised; because it is not rightly understood, but by good Arithmetick; otherwise you can never understand prospective, because you can never guess rightly how much a Pillar or Figure, or the like must decline, or lose at their several distances, according to Art and Proportion; For when you Etch a piece of prospective after a drawing or a print, observe these Rules, beware of perfection at a distance, and be sure to shadow that which is nearest to the Eye, perfectest and strongest, and the farther from the Eye, it must decline in length and breadth, and heighth according to

*Art and Proportion*, observe also to let it *lose* and be fainter by equal *degrees*.

*Away to Grave any hand or letter upon a Copper Plate.*

Take some *Charcole* and kindle them, then take a *hand-vice* and screw it to the corner of the *plate*, and hold it over the *fire* till it be warm, then take a piece of *Virgins wax*, and rub it all over the *plate* untill it is covered every where alike; this being done, take a *stiff feather* of a *Ducks wing* that is not *ruffled*, and drive it even and smooth every where alike, and let it coole, then write the *hand* and *letter* which you intend to *grave* upon the *plate*, on a piece of *paper* with *ungum'd Ink*; then take the *paper* which you have written, and lay that side which is written downwards next to the *wax*, and fasten the four *corners* with a little *soft wax*, but be sure to place the writing so, that the lines may run straight, then you must take a *Dogs Tooth*, and rub the *paper* all over which is *fastned*, and not miss any place; this being done, take off the *paper* from the *plate* and you shall see the very same *Letters* which you wrote on the *paper* hath left their *perfect impression* upon the *wax*; then take a *Stift* and draw all the *Letters* through the *wax* upon the *plate*, and when you have done that, warm the *plate*, and take a *linnen rag* and rub the *wax* clean off, and you shall see all the *Letters* drawn upon the *Copper*, then get some good *French Gravers* and grind them, as they should be very sharp towards the *points* upon a *Grind-stone*, and afterwards whet them very smooth and sharp upon a good *Oyl stone*, then *Grave* the *Letters* with them.

*The way to polish a Copper Plate.*

At first you buy the *Copper rough*, then you have it *planished*, if you cannot do it your self; when it is *planished*, then you *polish* it with these following *Instruments*.

The



*The Names of the Instruments or Tooles which are used  
to polish a Copper Plate.*

A *Plain* which cuts very well, and of an indiffer-  
rent bigness, but not broad; some pieces of *pumice-stones*  
some pieces of *Sand-stones*, and some *Moulton-stones*; a  
soft *blew stone*, and a *burnisher* and *scraper*; and some  
*Charcole*.

*The use of every particular Tool or Instrument.*

First fasten your *Plate* with some small *Nails*, to a  
place that is as high as your *middle*; then make use  
of the *plain* to shave all the roughness off from it and  
make it very even in all places alike, and if you per-  
ceive any crackles or little holes upon that side which you  
shave, then you must shave them all clean out, and when  
you have shaved it even and smooth with the *plain*, then  
take a piece of *Sand-stone*, and wet the plate with some  
water, and rub to and fro with the stone upon the plate,  
till you have worn it very smooth and even every where  
alike, but be sure to choose the softest stones, because  
they make the least scratches; and when you have worn  
it even and smooth with this stone, wash off the sand from  
the Plate, and take a piece of *Pumice stone*, and rub  
to and fro upon the Plate, quite across the grain of  
the former stone, because it is of a hard sandy nature,  
and will therefore leave some scratches; therefore the  
*Pumice stone* is of a more softer and spungy nature, and is  
always used to wear out the former scratches: and  
when you have worn out all the former scratches, you  
will perceive the plate to be worked into a finer grain, then  
wash the sand very clean off from the plate; then  
make use of the *moulton stone*, and work with it quite ac-  
cross the grain of the *Pumice stone*, untill you have worn  
it quite out; withall be sure you supply this and all  
the other stones with water, when you work with them  
upon the plate, and when you have worn out all the

scratches of the *Pumice stone* clean out, then for the fourth make use of the *soft blew stone*, it being of a very *soft grain* and *softer* then any of the former; then work with that quite across the grain of the *Moulton-stone*, till the grain is worn out, but if you perceive any scratches in the plate here or there, rub them over with your *burnisher* till you have work't them out, but in case they are very deep, you must make use of your *scraper*, and scrape them out, and *burnish* them afterwards; this being done, in the fifth place you must *burnish* it all over; last of all take a *charcole* which is thoroughly burnt, and scrape off the *Rine*; then put it in the fire till it is thoroughly kindled, then take it out and quench it in *Chamber Lee*, and make use of it as of the former, till you have *glased* the plate; then wash it very clean with *fair water*, and let it dry.

*The Manner or Way of Mezo Tinto.*

First take a very well polished Plate of Copper, and ruffen it all over with your *Engin* one way, then cross it over with the *Engin* again, and if you find occasion, then cross it over the third time, untill it be ruffened all over alike (that is to say) if it were to be printed, it would print black all over; this done, take *Charcole* or black Chalk to rub over the plate, and then draw your design with white Chalk upon the plate, then take a sharp Stiff and trace out the outlines of the design you drew with the white Chalk, and where you would have the light strike strongest, take a *burnisher*, and burnish that part of the plate, where you would have the light strike as clean as it was when it was first polished; where you would have the fainter light, you must not polish it so much, and this way you may make it either fainter or stronger, according to your fancy. As for the manner or shape of the *Engin*, they are divers, and if any ingenious person have a desire to have any made, the Author will give them farther directions.

F I N I S.

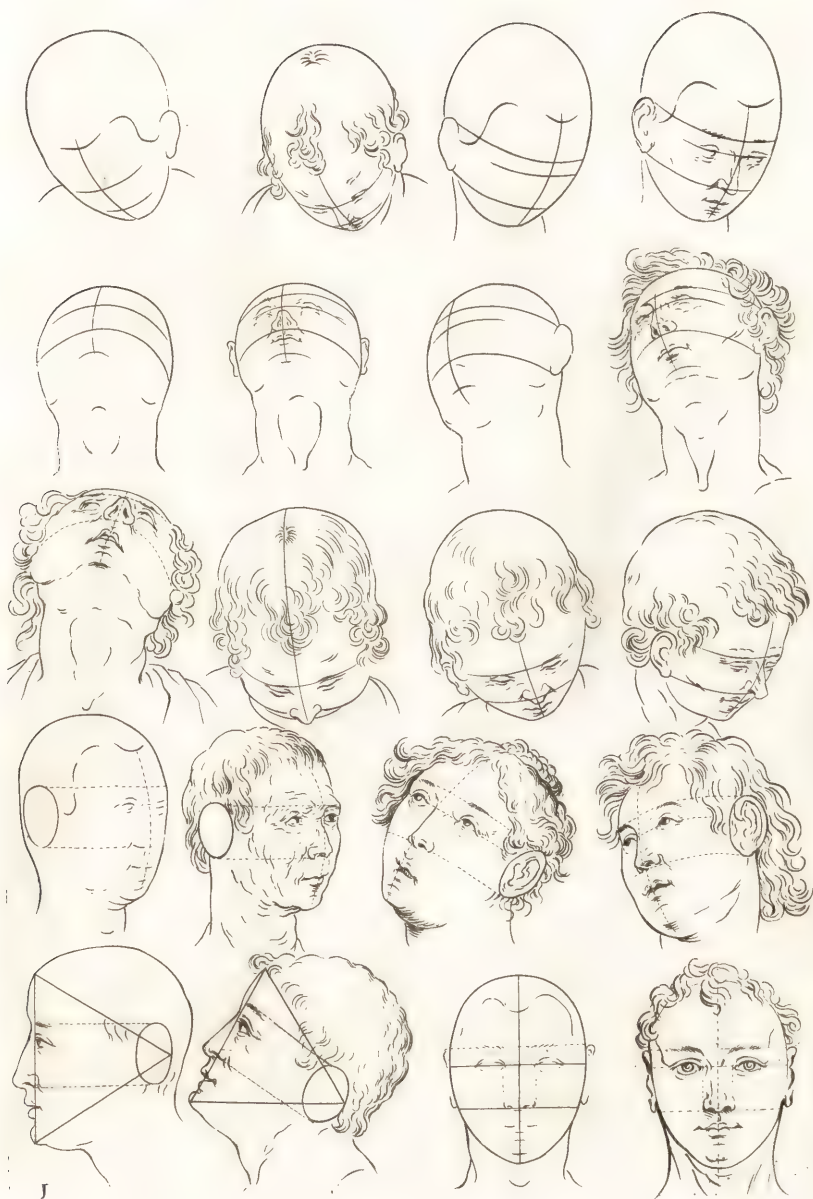
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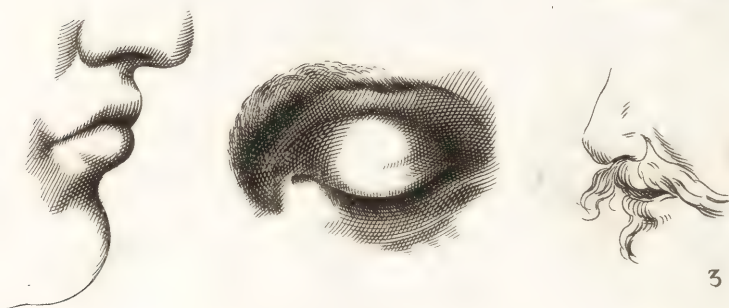


















































































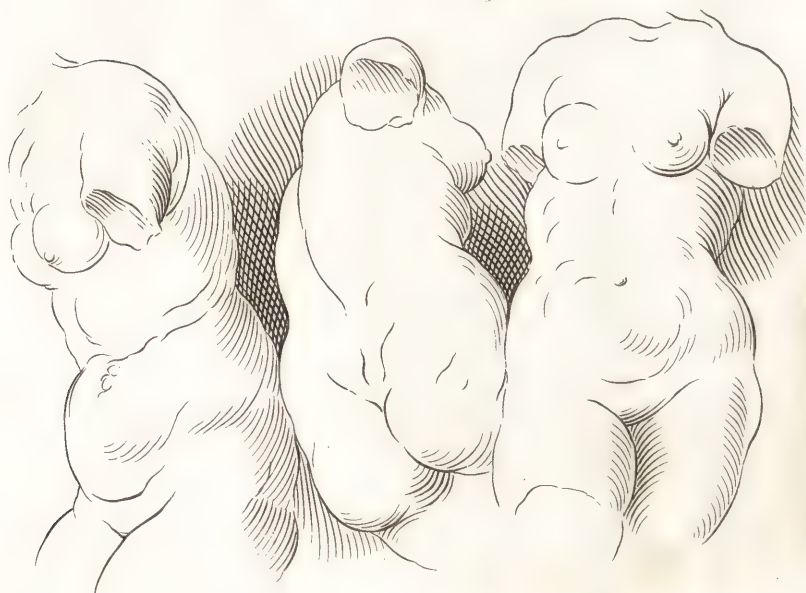










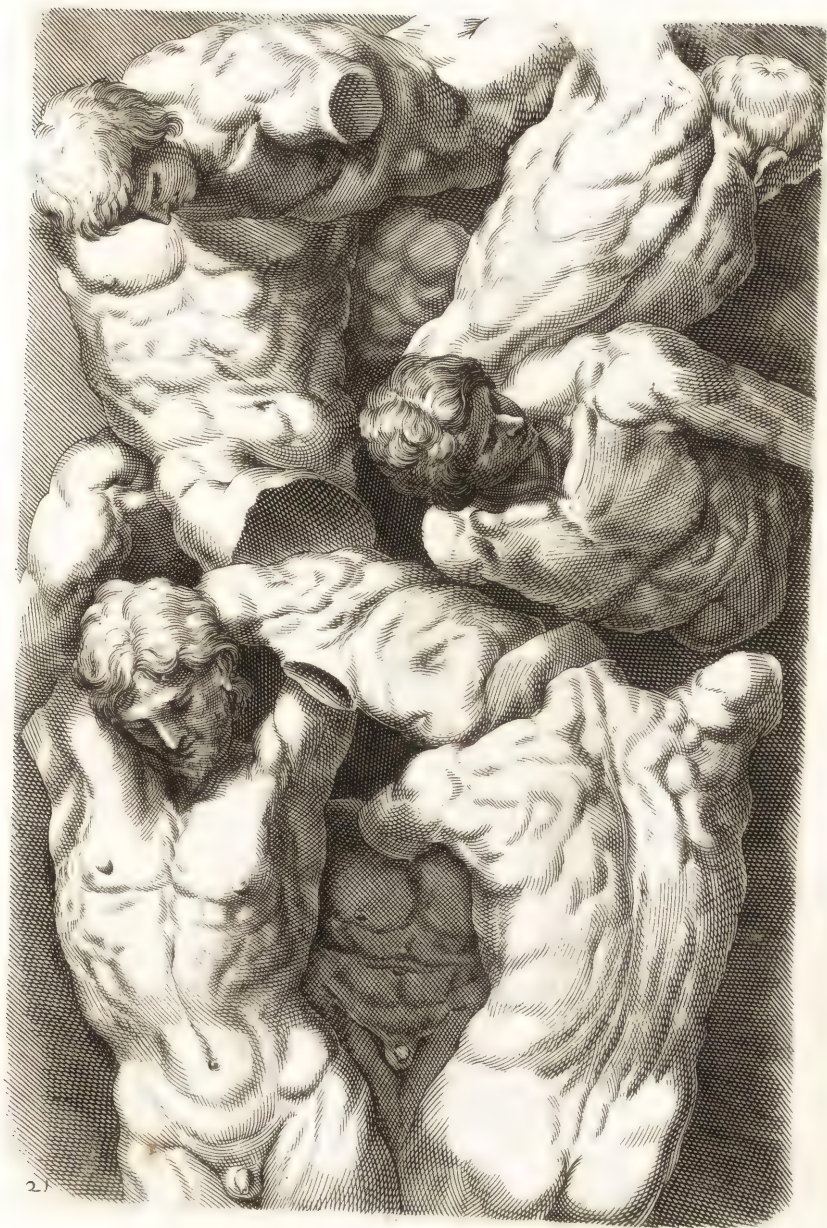




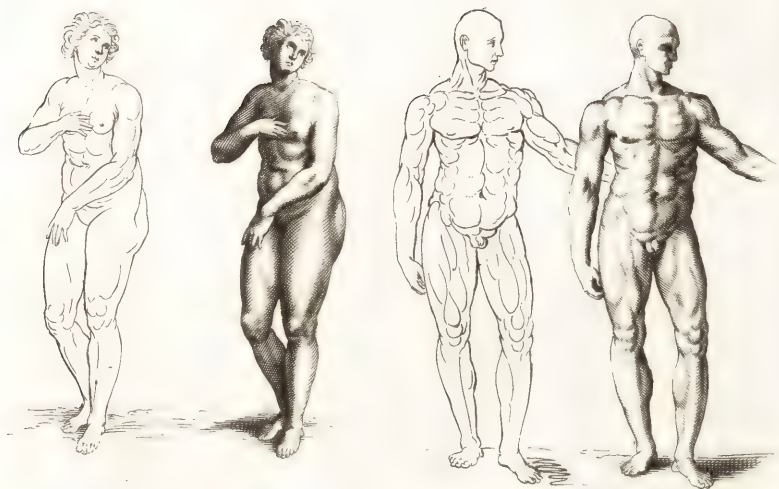






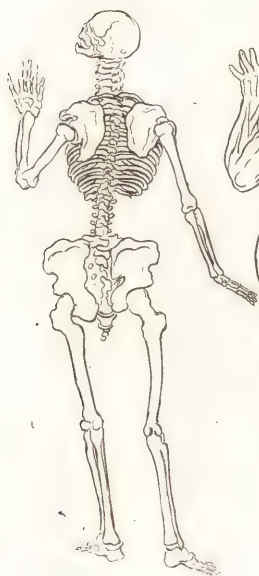
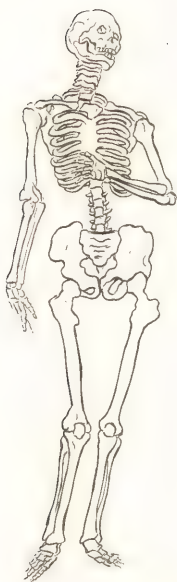














































Veni Dilecte mi, egrediamur in agrum, commoremur in villis. cantici. cap. vi. v. 11.









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